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Ontario Geological Survey
Open File Report 6166

South Swayze Area High-Density Regional Lake Sediment and Water Geochemical Survey, Northeastern Ontario

2005

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ONTARIO GEOLOGICAL SURVEY

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South Swayze Area High-Density Regional Lake Sediment and Water Geochemical Survey, Northeastern Ontario

by

P.A. Takats and J.E. Jackson

2005

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South Swayze Area High-Density Regional Lake Sediment and Water Geochemical Survey, Northeastern Ontario

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Open File Report 6166
2005

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Abstract

Fieldwork for a lake sediment and water geochemical survey of the South Swayze area, centred in the Biscotasi Lake area and approximately 120 km north of Sudbury, was carried out in July 2002. Lake sediment and water samples were collected from 1051 lake sites and analyzed by INAA and ICP-MS for 57 elements. Preliminary results and interpretation of the survey data shows the presence of at least 22 anomalous areas. Anomalous designation for these areas were based on the distribution of the following elements: gold, silver, copper, nickel, cobalt and chromium.

The coincidence of many of these anomalies with areas of known mineral occurrences and mineralization supports the use of lake sediment geochemistry as a viable sampling method for mineral exploration in the area. This survey has identified several potential new exploration target areas for copper and nickel. Digital geochemical data for this survey has been released separately from this report as Miscellaneous Release–Data 150 [illegible]IRD 150).

Introduction

A helicopter-supported regional lake sediment and water geochemical survey of the South Swayze area was conducted by staff of the Ontario Geological Survey (OGS) from July 15 to July 30, 2002. The surveyed area is centred on Biscotasi Lake, between Sudbury and Timmins, approximately 120 km north of Sudbury, Ontario (Figure 1), and covers the southernmost portion of the Swayze greenstone belt. The Swayze greenstone belt (SGB) is the western extension of the mineral-rich Abitibi greenstone belt, a Neoarchean granitoid-greenstone terrane that developed between 2.8 and 2.6 Ga (Jackson and Fyon 1991).

A total of 1051 lake sites were sampled over a 2714 km^2 area representing a sampling density of 1 sample per 2.6 km^2. Forty townships were sampled partially or in whole, covering an area that is represented on the following National Topographic System (NTS) 1:50 000 scale map sheets: 41 O/01 (Indian Lake), 41 O/08 (Biscotasing), 41 O/09 (Opeepeesway Lake), 41 P/04 (Low Water Lake), 41 P/05 (Westree), and 41 P/12 (Gogama). The survey boundaries lie within 81°30′ N and 82°30′ N longitude and 47°00′ W and 47°45′ W latitude.

From this study, a total of 1049 water and 995 sediment samples were prepared for analysis and submitted to several laboratories for the determination of approximately 57 elements, including Au. Limnological (water quality) parameters were also collected for 1051 sites. The data described in this report are also being released in digital format as Miscellaneous Release—Data 150 (MRD 150), that is available separately from this report.

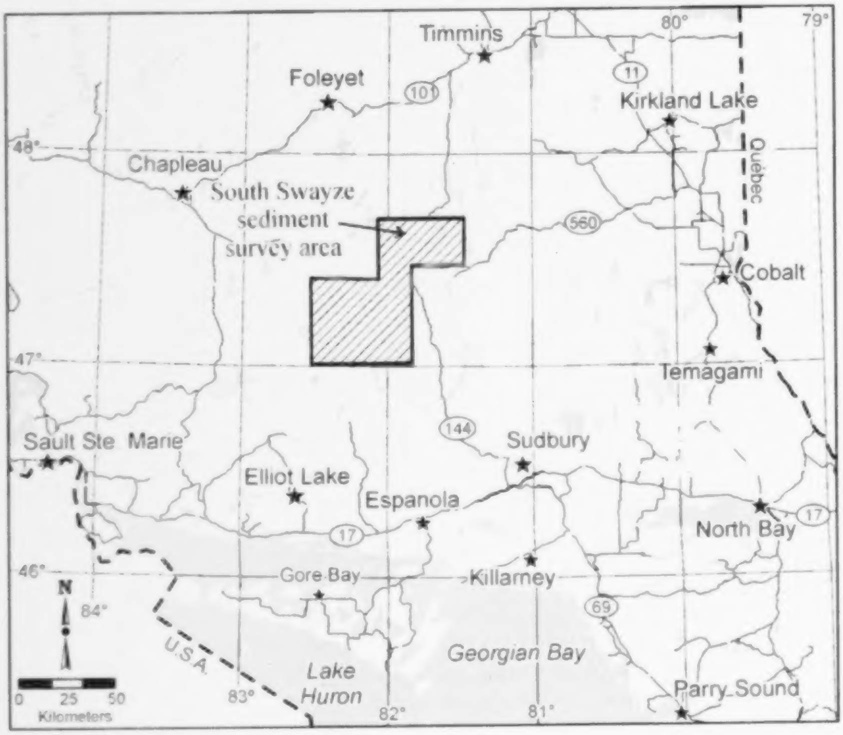

Timmins
80°
79°
Foleyet
101
11
Kirkland Lake
48°
Chapleau
Québec
South Swayze
sediment
survey area
560
Cobalt
47°
Temagami
144
Sault Ste Marie
Sudbury
Elliot Lake
Espanola
North Bay
17
17
46°
Gore Bay
Killarney
N
84°
69
U.S.A.
Georgian Bay
Lake
Huron
Parry Sound
0
25
50
Kilometers
83°
82°
81°

Figure 1. Location map of the South Swayze lake sediment and water survey area.

The South Swayze survey area was previously sampled for lake sediments by the national geochemical reconnaissance (NGR) lake sediment and water program (Geological Survey of Canada 1986, 1988). The program was undertaken by the Geological Survey of Canada (GSC) and included portions of the current survey area that fall within NTS map sheets 41 P and 41 O. An average sampling density of 1 sample per 13 km^2 was achieved by the NGR survey in this region.

Bedrock Geology

The Swayze greenstone belt (SGB) is located in the western Abitibi Subprovince of the Superior Province. The Swayze greenstone belt is bound to the north by the Nat River granitoid complex, to the west by the Kapuskasing structural zone, to the south by the Ramsey-Algoma granitoid complex and to the east by the Kenogamissi granitoid complex. The SGB is connected to the Abitibi greenstone belt by a narrow band of metasedimentary and metavolcanic rocks that wrap around the northern and southern margins of the Kenogamissi granitoid complex (Heather 1993; Heather, Shore and van Breemen 1995).

Massive peridotite, pyroxenite and dunite intrusions are common within the SGB. These ultramafic rocks are also spatially related to polysutured and spinifex textured komatiite volcanic flows. Mafic to intermediate metavolcanic and synvolcanic intrusive rocks are widely dispersed throughout the belt. These include iron-tholeiitic basalt, magnesium-tholeiitic basalt, calc-alkalic basalt and gabbro and/or diorite sills and dikes. The metavolcanic rocks consist of massive, pillowed, pillow breccia, variolitic and amygdaloidal flows. Several large sequences of felsic to intermediate metavolcanic rocks also occur within the SGB and consist of massive to pillowed flows and associated pyroclastic rocks. Chemical metasedimentary rocks consisting of sulphide- and carbonate-facies iron formations occur within most of the metavolcanic sequences within the SGB. Older sequences of clastic metasedimentary rocks in the SGB contain a close temporal and tectonic relationship to the metavolcanic rocks in the belt. Younger sequences of clastic metasedimentary rocks in the SGB unconformably overlie the older supracrustal sequences and are correlated with the Timiskaming assemblage rocks in the Abitibi greenstone belt. These supracrustal assemblages are correlative with the assemblages of the Abitibi greenstone belt (Ayer et al. 2002; Ayer et al. 2003; Thurston 2002) and have been simplified to 9 distinct lithostratigraphic assemblages with recent mapping and U-Pb zircon geochronological results.

This geochemical survey covers the metavolcanic and metasedimentary rocks between Gogama and Biscotasing and the Ramsey-Algoma granitoid complex to the south (Figure 2). The SGB has a high potential for mesothermal gold, volcanogenic massive sulphide copper-zinc-lead and mafic to ultramafic intrusive and extrusive related nickel-copper±platinum group element (Ni-Cu±PGE) mineralization (Heather 1993).

Quaternary Geology and Physiography

Elevation and topographic relief in the survey area increases gradually to the southwest with the maximum occurring in the southwest corner (Gladwin Township area) and minimum in the northeast corner (Groves Township area). Elevation within the survey area ranges from 330 to 570 m asl. Low to moderate relief characterizes most of the terrain between Gogama and Biscotasi Lake. Low relief is typical over glaciofluvial and eolian deposits and moderate relief is prevalent in morainal and bedrock-dominated terrain (Roed and Hallett 1979a). Steep-sided gullies form along north- and northwest-trending regional fault zones in the uplands to the southwest. Rugged rocky uplands of moderate to high relief trend northwest in the Ramsey Lake to Mississagi River area (Roed and Hallett 1979b).

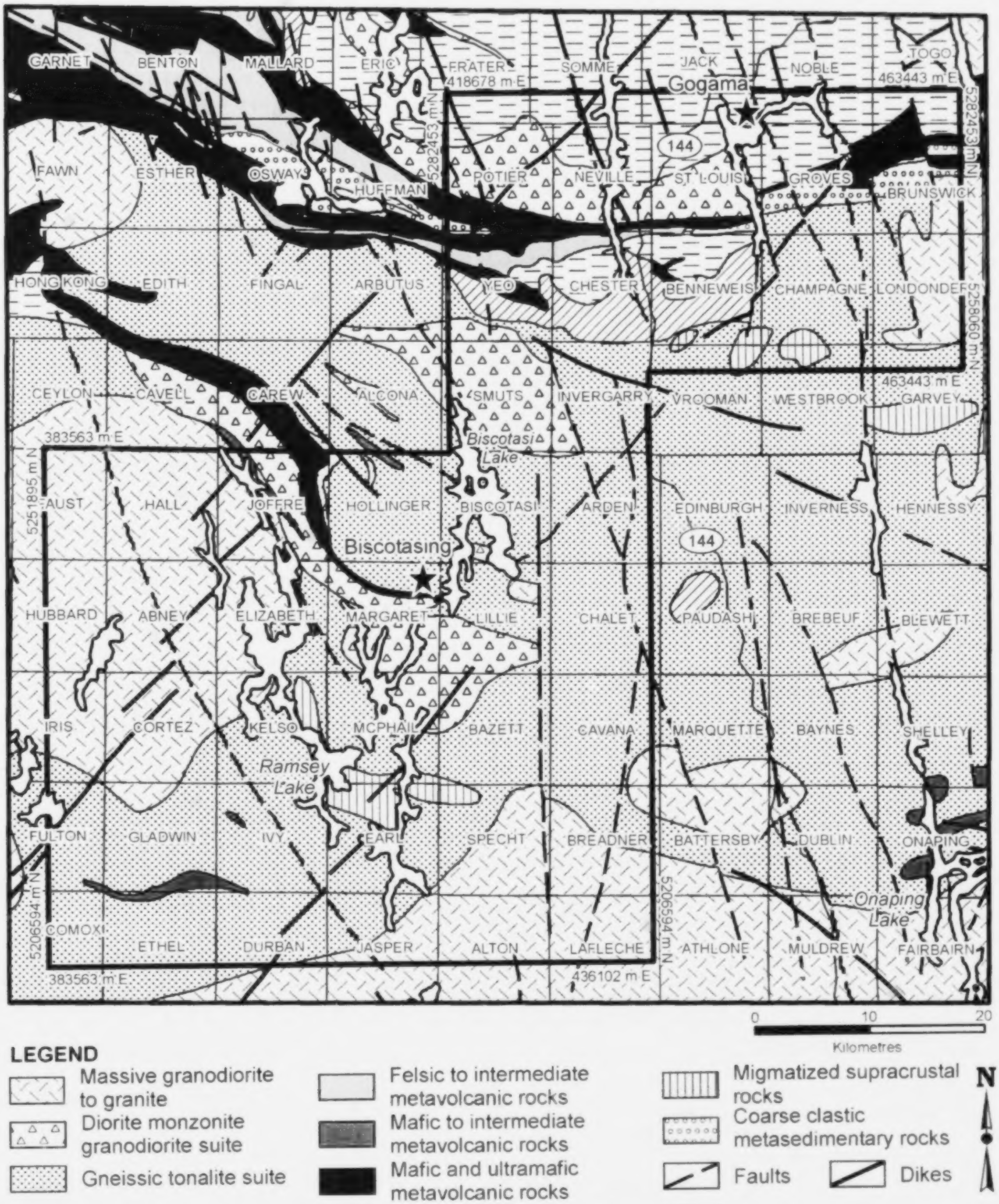

GARNET
BENTON
MALLARD
ERIC
FRATER
418678 m E
SOMME
JACK
Gogama
NOBLE
TOGO
463443 m E
5282453 m N
144
FAWN
ESTHER
OSWAY
HUFFMAN
POTIER
NEVILLE
ST. LOUIS
GROVES
BRUNSWICK
HONG KONG
EDITH
FINGAL
ARBUTUS
YEO
CHESTER
BENNEWEIS
CHAMPAGNE
LONDONDERRY
5258060 m N
463443 m E
CEYLON
CAVELL
CAREW
ALCONA
SMUTS
INVERGARRY
VROOMAN
WESTBROOK
GARVEY
383563 m E
Biscotasi Lake
5251895 m N
FAUST
HALL
JOFFRE
HOLLINGER
BISCOTASI
ARDEN
EDINBURGH
INVERNESS
HENNESSY
Biscotasing
144
HUBBARD
ABNEY
ELIZABETH
MARGARET
LILLIE
CHALET
PAUDASH
BREBEUF
BLEWETT
IRIS
CORTEZ
KELSO
MCPHAIL
BAZETT
CAVANA
MARQUETTE
BAYNES
SHELLEY
Ramsey Lake
FULTON
GLADWIN
IVY
EARL
SPECHT
BREADNER
BATTERSBY
DUBLIN
ONAPING
5206594 m N
Onaping Lake
COMOX
ETHEL
DURBAN
JASPER
ALTON
LAFLECHE
ATHLONE
MULDREW
FAIRBAIRN
383563 m E
436102 m E
0
10
20
Kilometres
LEGEND
Massive granodiorite to granite
Diorite monzonite granodiorite suite
Gneissic tonalite suite
Foliated tonalite suite
Felsic to intermediate metavolcanic rocks
Mafic to intermediate metavolcanic rocks
Mafic and ultramafic metavolcanic rocks
Mafic to ultramafic rocks
Migmatized supracrustal rocks
Coarse clastic metasedimentary rocks
Faults
Dikes
Lakes
N

Figure 2. Generalized bedrock geology of the South Swayze lake sediment and water survey area (*after* OGS 2003).

The study area is dominated by bedrock with a thin veneer of discontinuous glacial drift (Figure 3; Barnett, Henry and Babuin 1991). The most significant Quaternary deposit in the area is a large moraine, the Sultan Scarp, located approximately 20 km south of Gogama, Ontario (Roed and Hallett 1979a,c). The Sultan Scarp likely formed during a halt in the recession of the Keewatin lobe of the Laurentide ice sheet approximately 11 000 years ago (Roed and Hallett 1979a). It is bound to the south by the extensive glaciofluvial outwash deposits of the Sultan Plain. The Sultan Scarp is a prominent 55 m high, discontinuous, north-facing ice-contact escarpment that spans the area from Garvey Township west to Invergarry Township, then continues in Ceylon Township, further west. It forms part of the height of land that separates the Hudson Bay and Great Lakes watersheds (Bernier and Goff 1993) across the central part of the survey area. Therefore, drainage in the northeastern part of the study area flows north; and drainage flows southward in the southwest.

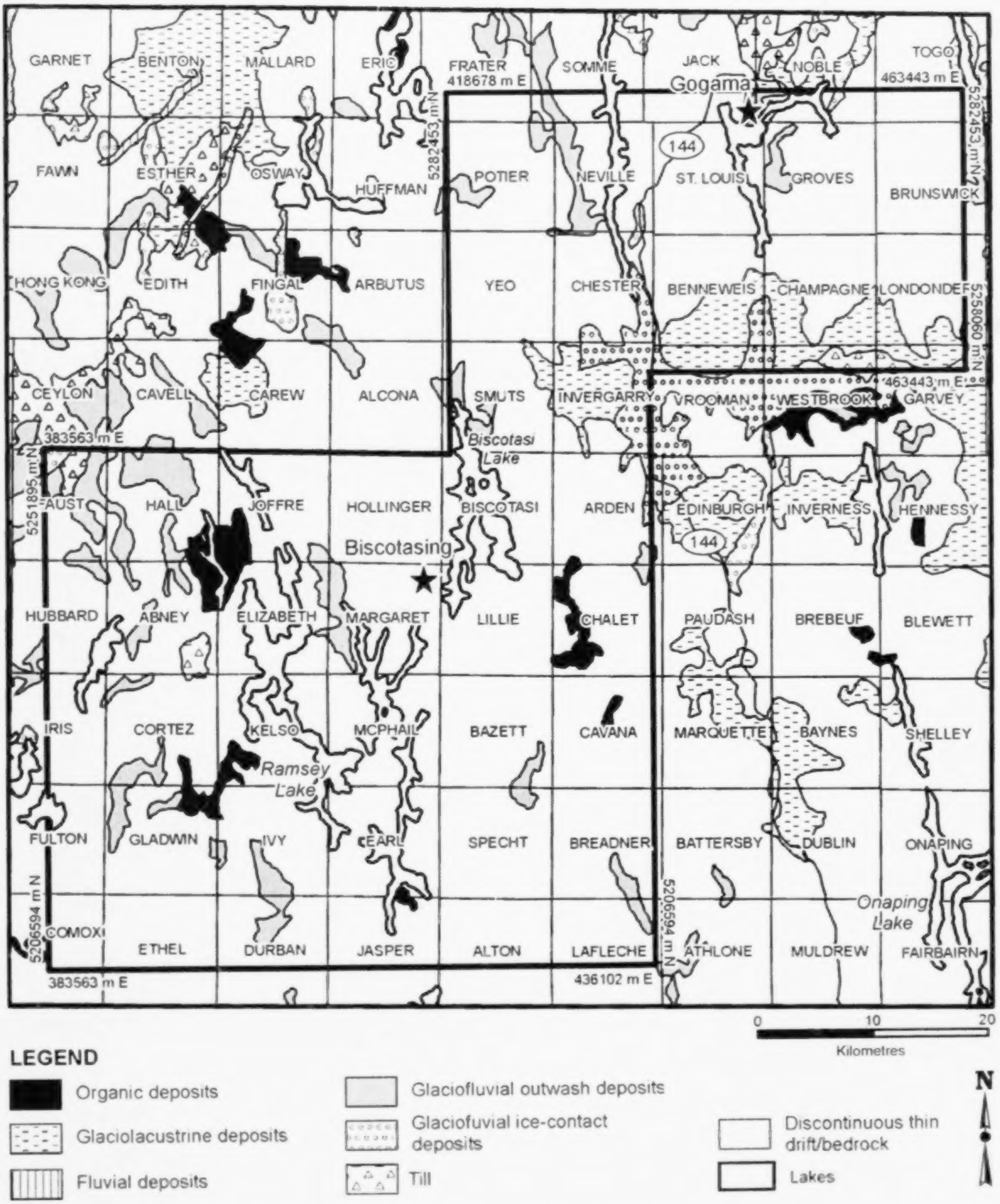
Several esker complexes are located in the Gogama area. The eskers occur as southward-trending ridges of sand and gravel flanked by gently rolling outwash plains typically in the northeastern part of the South Swayze survey area (Roed and Hallett 1979a). The distribution of surficial deposits is dominantly topographically controlled with glaciofluvial ice-contact and outwash deposits in valleys and glaciolacustrine and organic deposits in topographic lows.

The major river systems in the survey area are the Mississagi River and Spanish River (East and West arms). The Spanish River is the largest watershed draining into Lake Huron. Other major bodies of water include the Biscotasi, Ramsey, Indian, and Mesomikenda lakes. Biscotasi Lake is one of the headwater lakes of the Spanish River. Urban development in the study area began with the building of the railway through Biscotasing and Ramsey and resulted in significant cultural impacts. These include a major episode of forest fires between 1880 and 1930 caused by railroad development and lightning, and the creation of many dams on the Spanish River to regulate and store water for the burgeoning logging and mining industries (Ministry of Natural Resources 2002).

Sampling Methods

Organic lake sediment samples were collected using the OGS sediment sampler from a helicopter float. In order to avoid anthropogenic metals derived from point or non-point sources of pollution and water-sediment interface effects (i.e., diagenetic cycling of Mn due to anoxic conditions resulting in secondary scavenging and/or accumulation of base metals), only the deep (older) sediment (>20 cm below the sediment surface) was collected. This deep sediment, which pre-dates industrial activity, closely reflects the natural geochemical inputs to the lake bottom that may be traced to the geology of the area. If a site did not contain an organic component (e.g., sand or clay or a mixture), then only a water sample was collected. The organic sediment was collected in a gravity corer that was lowered from the helicopter float and then pulled to surface. Collected sediment was then deposited into a sample bag. The upper 20 cm of the sample core was discarded to avoid the collection of any anthropogenic material. The sample bag containing the deep sediment was then sealed in an airtight plastic bag in order to avoid contamination between samples. Details of the OGS sediment sampling and coring device can be found in Dyer, Takats and Felix (2004).

Water quality parameters (pH, electrical conductivity, oxidation-reduction potential, and dissolved oxygen) were determined at lake sites using a YSI water quality analyzer. This was done using a diaphragm pump, plastic hoses and a flow cell. Water was pumped from the lake and allowed to purge the hoses and flow cell prior to the recording of water quality parameters of the water held in the flow cell. The water samples were collected at a depth of 0.5 m below surface from shallow lakes (<3 m deep); and at a depth of 2 m from deep lakes (>3 m). Approximately 50% of the lake sites were sampled for sediment at a depth of 4 m or less, therefore, half of the lakes were sampled for water at a depth of 0.5 m.


GARNET
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GROVES
BRUNSWICK
HONG KONG
EDITH
FINGAL
ARBUTUS
YEO
CHESTER
BENNEWEIS
CHAMPAGNE
LONDONDERRY
5258060 m N
CEYLON
CAVELL
CAREW
ALCONA
SMUTS
INVERGARRY
VROOMAN
WESTBROOK
463443 m E
GARVEY
383563 m E
Biscotasi Lake
5251895 m N
AUST
HALL
JOFFRE
HOLLINGER
BISCOTASI
ARDEN
EDINBURGH
INVERNESS
HENNESSY
144
Biscotasing
HUBBARD
ABNEY
ELIZABETH
MARGARET
LILLIE
CHALET
PAUDASH
BREBEUF
BLEWETT
IRIS
CORTEZ
KELSO
MCPHAIL
BAZETT
CAVANA
MARQUETTE
BAYNES
SHELLEY
Ramsey Lake
FULTON
GLADWIN
IVY
EARL
SPECHT
BREADNER
BATTERSBY
DUBLIN
ONAPING
5206594 m N
5206594 m N
Onaping Lake
COMOX
ETHEL
DURBAN
JASPER
ALTON
LAFLECHE
ATHLONE
MULDREW
FAIRBAIRN
383563 m E
436102 m E
0
10
20
Kilometres
N
LEGEND
Organic deposits
Glaciolacustrine deposits
Fluvial deposits
Glaciofluvial outwash deposits
Glaciofuvial ice-contact deposits
Till
Discontinuous thin drift/bedrock
Lakes

Figure 3. Generalized Quaternary geology of the South Swayze lake sediment and water survey area (after Barnett, Henry and Babuin 1991).

Water samples were kept cool after collection and processed (filtered through 0.45 μm filters and acidified with concentrated HNO_3 to a 1% sample solution) within 24 hours.

At each site, sediment descriptions and observations were recorded on standardized forms and entered into a Microsoft® Access database at the end of each day. The water quality parameters were downloaded from the YSI data logger and entered into the database. A global positioning system (GPS) receiver was utilized to record accurate sample site positions.

Sample Preparation and Analytical Methods

The organic lake sediments were placed in a breathable fabric sample bag and partially air-dried at base camp prior to shipment to the analytical laboratory. The samples were freeze-dried to retain volatile elements, and partially pulverized and sieved to the -80 (<177 μm) mesh size fraction. Laboratory analysis of the -80 mesh size fraction was preceded by digestion of 1 g of sample material in nitric acid-aqua regia followed by analysis by inductively coupled plasma mass spectrometry (ICP-MS) and inductively coupled plasma optical emission spectrometry (ICP-OES) for 57 elements. The nitric acid-aqua regia digestion is considered a partial digestion method because it attacks all of the matrix constituents in the sample except for the silicate minerals.

An aliquot of 10 g of the -80 mesh size fraction was pressed into briquettes and analyzed by instrumental neutron activation (INAA) for gold and 26 other elements by a commercial laboratory. Loss-on-ignition was determined by Geo Labs (Sudbury, Ontario) at 500°C, on 0.5 g of sample material, using an automated gravimetric technique.

Quality Control and Quality Assurance

Analytical precision and accuracy of the lake sediment analyses was monitored with replicate analyses of certified reference materials (CRMs) and duplicates of sampled lake sediments. The CANMET lake sediment standards LKSD-1 and LKSD-4 (Lynch 1990) as well as 2 in-house preparations of lake sediment previously sampled and analyzed were used in the quality control (QC) program.

The QC samples were inserted randomly in the sample sequence between the sample preparation and laboratory analyses, therefore analyses were not carried out in order of the sampling of the lakes. One QC sample was inserted per 10 lake site samples. The QC sediment samples consisted of analytical (pulp) duplicates, certified reference material (CRM) and 2 internal (OGS) bulk standards. Analytical pulp duplicates were prepared by halving 1 in 40 of the dried sample pulps and inserting them into the sample sequence. Approximately every 20th sample analyzed was either a CRM or an OGS internal standard.

Table 1 summarizes the basic statistics of the elements determined in the geochemical database, including quality control data for sample duplicates and CRMs. The estimate of precision is determined from duplicate analyses and the coefficient of variation from the reference material. Only 37 of the 46 duplicate pairs fit the criteria for appropriate lake sediment media (i.e., loss-on-ignition >10%). Therefore only these 37 duplicate pairs were used to determine the estimate of precision for the various elements. However, all of the analytical data, including the data used to prepare this table can be found in the associated digital data set, Miscellaneous Release—Data 150 (MRD 150), published separately from this report.

Table 1. South Swayze area lake sediment data set; summary of elements analyzed by ICP and INAA and quality control data, including estimates of precision.

				(n=980, based on ICP-OES)			37 pairs	LKSD-1 Reference Standard (n=20)			LKSD-4 Reference Standard (n=19)		
Element	**Analytical Method**	**Units**	**MDL**	**Median**	**RANGE**		**Estimated Precision**	**Certified Value**	**Mean Q.C. Result**	**Coefficient of variation (%)**	**Certified Value**	**Mean Q.C. Result**	**Coefficient of variation (%)**
					Min	**Max**							
Ag	ICP-MS	ppm	0.04	0.11	0.04	1.01	**±0.02**	0.6	0.63	**4**	0.2	0.25	**6**
Al	ICP-OES	ppm	20	8969	943	32200	**±2700**	41300	3909	**7**	31200	12013	**7**
As	INAA	ppm	0.5	2.1	0.3	261	**±1.0**	40	38.6	**2**	16	16.8	**2**
Au	INAA	ppb	2	1	1	225	**±4.9**	5	4	**83**	2	2	**83**
Au	ICP-MS	ppm	0.01	n/a	0.01	0.97	**n/a**	5	n/a	**n/a**	2	N.D.	**n/a**
Ba	ICP-MS	ppm	0.5	57.3	14.8	502	**±4**	430	96.6	**4**	330	143.20	**6**
Be	ICP-OES	ppm	0.03	0.36	0.04	2.82	**±0.055**	1.1	0.13	**13**	1	0.39	**7**
Br	INAA	ppm	0.5	38.0	6.0	93.6	**±2**	11	11.4	**4**	49	52.3	**1**
Ca	ICP-OES	ppm	500	6784	1500	114000	**±1000**	77200	69980	**5**	12900	9780	**3**
Cd	ICP-MS	ppm	0.04	0.60	0.15	2.29	**±0.028**	1.2	1.33	**2**	1.9	2.09	**6**
Ce	ICP-MS	ppm	0.2	55.8	2.0	>300	**±7**	27	18.2	**7**	48	41.2	**6**
Co	ICP-MS	ppm	0.04	5.07	0.42	51.5	**±1.0**	9	7.67	**4**	11	9.19	**6**
Cr	ICP-MS	ppm	1	22	3	183	**±4**	12	13	**8**	21	20	**7**
Cs	ICP-MS	ppm	0.01	0.45	0.06	1.54	**±0.11**	1.5	0.52	**7**	1.7	1.14	**13**
Cu	ICP-MS	ppm	0.4	26.4	5.2	>500	**±1**	44	44	**2**	30	31	**7**
Dy	ICP-MS	ppm	0.02	2.74	0.18	17.2	**±0.18**	-	1.74	**8**	-	3.00	**7**
Er	ICP-MS	ppm	0.02	1.40	0.09	8.59	**±0.12**	-	0.98	**9**	-	1.73	**6**
Eu	ICP-MS	ppm	0.01	1.13	0.06	>4.00	**±0.10**	-	0.48	**8**	-	0.93	**6**
Fe	ICP-OES	ppm	20	8280	510	>13500	**±3000**	18000	18549	**7**	27000	25918	**4**
Ga	ICP-MS	ppm	0.09	2.23	0.17	9.45	**±0.52**	-	2.10	**8**	-	4.29	**7**
Gd	ICP-MS	ppm	0.03	4.86	0.27	>30.0	**±0.35**	-	2.40	**7**	-	4.10	**6**
Hf	ICP-MS	ppm	0.02	0.03	0.02	>0.30	**±0.02**	3.6	0.04	**20**	2.8	0.03	**26**
Hg	ICP-MS	ppm	0.08	0.14	0.08	2.64	**±0.01**	0.11	0.13	**7**	0.19	0.20	**8**
Ho	ICP-MS	ppm	0.006	0.520	0.030	>3.00	**±0.045**	-	0.35	**9**	-	0.61	**6**
K	ICP-OES	ppm	20	223	22	995	**±150**	9100	386	**16**	6600	876	**10**
La	INAA	ppm	1	39	2	377	**±2**	16	15.1	**2**	26	25.7	**2**
Li	ICP-MS	ppm	0.3	3.31	0.32	16.0	**±1.65**	7	4.26	**6**	12	9.63	**8**
LOI		%	0.05	45.0	11	93	**±1.0**	23.5	22.3	**1**	40.8	40.0	**1**
Lu	ICP-MS	ppm	0.005	0.180	0.010	>1.00	**±0.01**	0.4	0.14	**9**	0.5	0.25	**6**
Mg	ICP-OES	ppm	6	1335	279	5429	**±800**	10300	6322	**8**	5400	3926	**5**
Mn	ICP-OES	ppm	0.7	139	12	>12000	**±50**	460	407	**6**	430	408	**4**
Mo	ICP-MS	ppm	0.06	1.36	0.27	28.4	**±0.15**	12	10.0	**3**	2	2.28	**84**
Na	ICP-OES	ppm	10	67	10	647	**±44**	14800	263	**22**	5200	207	**13**
Nb	ICP-MS	ppm	0.04	0.61	0.04	1.74	**±0.40**	7	0.63	**34**	9	1.09	**10**
Nd	ICP-MS	ppm	0.09	34.5	1.40	>200	**±3**	16	12.2	**6**	25	23.2	**6**
Ni	ICP-OES	ppm	1	16	2	>150	**±3**	11	16	**9**	32	36	**5**
P	ICP-OES	ppm	10	972	144	4009	**±115**	900	744	**6**	1300	1371	**4**
Pb	ICP-MS	ppm	0.3	5.6	0.8	111	**±0.4**	84	82.6	**4**	93	94.5	**7**
Pr	ICP-MS	ppm	0.03	9.12	0.36	>40.0	**±0.8**	-	2.94	**6**	-	5.91	**7**
Rb	ICP-MS	ppm	0.06	2.96	0.47	13.20	**±1.4**	24	3.64	**8**	28	10.5	**8**
S	ICP-OES	ppm	20	3365	693	26383	**±375**	15700	15232	**6**	9900	9838	**4**
Sb	ICP-MS	ppm	0.03	0.08	0.03	1.08	**±0.017**	1.2	0.64	**10**	1.5	1.25	**5**
Sc	ICP-OES	ppm	0.1	2.00	0.10	>18	**±0.90**	9	2.37	**15**	7	3.94	**10**
Sm	INAA	ppm	0.1	6.20	0.40	42.9	**±0.40**	4	3.98	**2**	5	5.23	**1**
Sn	ICP-MS	ppm	0.7	1.70	0.80	3.30	**n/a**	16	3.28	**3**	5	3.32	**6**
Sr	ICP-MS	ppm	0.9	23.8	7.7	65.0	**±6**	250	67.7	**3**	110	41.0	**6**
Ta	INAA	ppm	0.5	0.3	0.3	2.6	**n/a**	0.3	0.4	**67**	0.4	0.4	**51**
Tb	ICP-MS	ppm	0.006	0.600	0.040	>3.00	**±0.03**	0.6	0.47	**49**	1.2	0.63	**30**
Th	ICP-MS	ppm	0.02	0.42	0.02	34.4	**±0.55**	2.2	1.35	**11**	5.1	1.92	**11**
Ti	ICP-OES	ppm	0.8	128	15.0	665	**±234**	3010	313	**82**	2270	440	**13**
Tl	ICP-MS	ppm	0.006	0.100	0.010	>1.00	**±0.02**	-	0.23	**4**	-	0.45	**8**
Tm	ICP-MS	ppm	0.006	0.190	0.010	>1.00	**±0.017**	-	0.14	**10**	-	0.25	**6**
U	ICP-MS	ppm	0.03	3.26	0.14	>90	**±0.60**	9.7	9.05	**3**	31	31.4	**8**
V	ICP-OES	ppm	0.4	25.4	2.1	>180	**±5**	27	21	**12**	32	34	**6**
W	ICP-MS	ppm	0.2	0.3	0.2	3.2	**n/a**	<4	0.65	**26**	<4	0.26	**24**
Y	ICP-MS	ppm	0.05	14.6	0.93	>90	**±0.08**	19	10.5	**8**	23	17.3	**6**
Yb	ICP-MS	ppm	0.02	1.18	0.07	7.65	**±0.10**	2	0.88	**9**	2	1.62	**6**
Zn	ICP-MS	ppm	2	64	7	>150	**±6.0**	337	>150	**n/a**	189	>150	**n/a**
Zr	ICP-MS	ppm	0.4	0.8	0.4	>22	**±0.40**	134	1.18	**28**	105	0.72	**16**

Notes:

1. ICP-MS= Inductively Coupled Plasma Mass Spectroscopy (aqua regia digestion)
2. ICP-OES= Inductively Coupled Plasma Optical Emission Spectroscopy (aqua regia digestion)
3. INAA= Instrumental Neutron Activation Analysis
4. MDL= method detection limit
5. n/a = elements are in concentrations at or below the detection limit or sample size too small (duplicate and reference materials).
6. Estimated precision at 95% confidence level; ICP-OES, ICP-MS, and INAA elements based on results of 37 duplicate pairs.
7. Q.C. Result= Average value obtained for the South Swayze study area
8. Coefficient of variation at one standard deviation (68% confidence level)
9. LKSD-1 and LKSD-4 are CANMET certified reference materials: Ag, As, Cd, Co, Cr, Cu, Fe, Hg, Mn, Mo, Ni, Pb, Sb, V and Zn determined by ICP by partial digestion, all other elements determined by total digestion. Elements determined by INAA were prepared from total digestion methods.

The analytical precision for each parameter analyzed was determined by plotting duplicate data on an X-Y chart and determining the variation of 95% of the data from a 1:1 ratio. The accuracy was determined by plotting the sequential values returned for certified reference standards inserted in the batch against a vertical scale of concentration and comparing this with the provisional values provided for the standards (Lynch 1990).

Approximately 1% of the sediment samples exceeded the upper detection limit of the ICP-MS and ICP-OES analytical methods in various rare earth elements and base metals, and are indicated with the ">" sign in Table 1. None of the duplicate samples had these elevated concentrations of elements. However, both LKSD-1 and LKSD-4 reference standards contain zinc concentrations greater than 150 ppm, the upper limit of detection for the ICP-MS method, therefore, the in-house reference materials were used to determine accuracy for zinc.

Analysis for gold in lake sediment was determined by 2 methods: INAA (ppb) results show 87 sample results above detection limit; and ICP-MS (ppm) results indicate 18 sample results above detection limit. Concentrations of gold in the LKSD-1 and LKSD-4 reference standards are within the detection limit by INAA, with high coefficients of variation (83%); and below the detection limit by ICP-MS (see Table 1). Two QC duplicate samples gave gold results above detection limit, however, gold was not detected in any duplicates by ICP-MS.

The analytical precision and accuracy of the water analyses was monitored with replicate analyses of certified standard materials and duplicates of the collected lake waters. The water reference standard used in this study is the National Research Council SLRS-4 (St. Lawrence River Standard #4). Blanks were obtained in the field using distilled water and acidified distilled water to monitor the filtering procedure, background contamination in sample containers and the analytical procedure. A total of 116 QC samples were inserted into the water sample sequence for analysis: 56 duplicates, 29 SLRS-4 and 31 water blanks.

Table 2 summarizes the statistical data and the precision estimates for the 47 elements determined in the South Swayze water samples by ICP-MS (in ppb). The precision was estimated by plotting duplicate pairs of data on an X-Y scatterplot and determining the variation of 95% of the data from a 1:1 ratio. The accuracy was determined by plotting the sequential values returned for SLRS-4 standards inserted in the batch against a vertical scale of concentration and comparing this with the provisional values provided for the standards by NRC. All of the analytical data for the lake waters, including this table, can be found in the associated digital data set, Miscellaneous Release–Data 150 (MRD 150), published separately from this report.

Several lake sites have water chemistry that contain Al, Mg or Mn of concentrations exceeding the upper detection limit of the ICP-MS analytical method and are indicated in the sample statistics with the ">" sign in Table 2. None of the reference material (SLRS-4) had these elevated concentrations, and one duplicate sample was removed from the statistical analysis for magnesium QC.

Gold was not detected in the sample duplicates used in quality control, however, 5 samples returned results of 0.02 ppb Au. The coefficient of variation for certain elements such as Au, Be, Sn and W is high and is due to poor analytical reproducibility at low concentrations in water samples. The overall accuracy of the analysis is satisfactory, with slightly higher values showing for Ca, Cu, Pb and Zn compared to the SLRS-4 provisional values (NRC).

Table 2. South Swayze area lake water data set; summary of elements analyzed by ICP-MS (in ppb) and quality control data, including estimates of precision.

		Sample Dataset (n=1049)			56 Dup pairs	SLRS-4 Certified Reference (N=29)		
Element	MDL (ppb)	Median	Range		Estimated Precision	Certified Value	Mean Q.C. Result	Coefficient of variation (%)
			Min	Max				
Ag	0.03	0.030	0.010	0.420	n/a	-	n/a	n/a
Al	0.1	66.8	0.5	>350	±67	54	50.6	6
Au	0.01	0.00	0.000	0.020	n/a	-	0.009	71
Ba	0.03	5.20	0.22	13.1	±1.4	12.2	12.9	3
Be	0.008	0.010	0.000	0.054	±0.01	0.007	0.009	33
Ca	200	3260	41	26900	±1700	6200	5480	8
Cd	0.002	0.016	0.002	0.755	±0.032	0.012	0.015	17
Ce	0.0002	0.242	0.001	2.22	±0.28	-	0.362	3
Co	0.006	0.031	0.006	1.47	±0.08	0.033	0.031	13
Cr	0.004	0.326	0.010	13.0	±0.19	12	0.330	15
Cs	0.0003	0.015	0.001	0.117	±0.04	1.5	0.007	7
Cu	0.06	0.930	0.170	41.6	±1.5	1.81	2.06	14
Dy	0.001	0.017	0.001	0.090	±0.07	-	0.024	10
Er	0.001	0.011	0.001	0.046	±0.007	-	0.013	11
Eu	0.0007	0.007	0.001	0.037	±0.01	-	0.009	21
Fe	0.4	89.6	2.90	2940	±60	103	96.2	7
Ga	0.001	0.010	0	0.120	±0.01	-	0.011	16
Gd	0.001	0.027	0.001	0.165	±0.02	-	0.041	11
Ho	0.003	0.004	0.001	0.017	±0.021	-	0.005	14
La	0.001	0.188	0.004	1.32	±0.18	-	0.294	3
Li	0.02	0.430	0.070	2.15	±0.1	-	0.458	10
Lu	0.0003	0.002	0	0.007	±0.001	-	0.002	20
Mg	50	841	2.5	>4000	±200	1600	1400	6
Mn	0.08	3.46	0.08	>150	±15.6	3.37	3.37	5
Mo	0.005	0.050	0.006	1.12	±0.07	0.21	0.221	5
Nd	0.004	0.174	0.002	1.20	±0.14	-	0.270	3
Ni	0.08	0.43	0.08	36.5	±0.35	0.67	0.629	13
Pb	0.002	0.25	0.02	5.12	±0.4	0.086	0.095	30
Pr	0.0003	0.046	0.001	0.325	±0.037	-	0.070	4
Rb	0.07	1.11	0.02	4.42	±0.2	-	1.53	3
Sb	0.003	0.032	0	0.250	±0.01	0.23	0.259	3
Sc	0.06	0.750	0.070	3.81	±0.30	-	1.10	8
Sm	0.002	0.030	0.001	0.190	±0.012	-	0.058	6
Sn	0.004	0.012	0	5.31	±0.27	-	0.013	67
Sr	2	14.7	0.07	55.10	±1.8	26.3	28.5	4
Tb	0.0004	0.003	0	0.017	±0.0016	-	0.004	13
Th	0.001	0.040	0	0.418	±0.05	-	0.019	26
Ti	0.001	1.07	0.050	16.0	±0.95	-	1.53	13
Tl	0.0002	0.007	0	0.195	±0.0062	-	0.008	22
Tm	0.0003	0.002	0	0.007	±0.0008	-	0.002	11
U	0.0007	0.042	0.001	1.26	±0.02	0.05	0.048	3
V	0.03	0.240	0.030	1.82	±0.14	0.32	0.345	10
W	0.0007	0.001	0	0.061	n/a	-	0.006	60
Y	0.003	0.108	0.004	0.574	±0.05	-	0.140	4
Yb	0.0008	0.010	0.001	0.041	±0.007	-	0.012	15
Zn	0.1	1.81	0.160	32.8	±1.9	0.93	1.38	42
Zr	0.004	0.240	0.005	5.87	±0.58	-	0.29	21

Notes:

1. ICP-MS= Inductively Coupled Plasma Mass Spectroscopy.
2. MDL = method detection limit (aqua regia digestion)
3. Estimated precision at 95% confidence level
4. SLRS-4 = National Research Council, St. Lawrence River Standard #4, certified reference water standard
5. C.V.% = coefficient of variation at one standard deviation (68% confidence level)
6. n/a = elements are in concentrations at or below the detection limit or the sample size is too small (duplicates and reference material).

Regional Geochemical Variations

Factors to consider when assessing the possible significance of an anomaly include correlation with bedrock geology, correlation with surficial (Quaternary) geology, the drainage area, the redox conditions of the lake, high concentrations of scavenging elements such as iron (Fe), manganese (Mn) oxides and organic matter, the magnitude of the anomalous concentrations, and the presence of multi-site anomalies and multi-element anomalies within the anomalous area.

In mineral exploration, correlation with geology is the most important factor when assessing the significance of a surficial geochemical anomaly. The surficial geology (unconsolidated deposits), under certain circumstances, may have a greater impact on the chemistry of lake media than bedrock. Carbonate materials within eskers and thick ice-contact stratified drift deposits often result in relatively hard, alkaline lake waters. This type of lake water provides a geochemical matrix for trace elements that is very different to that of most shield lakes, which are mildly acidic and organic-dominated. In general, most metals are relatively immobile in such alkaline conditions, therefore, geochemical anomalies might be considered more significant and perhaps relatively close to source. Dilution or addition to the trace metal signature in sediments can occur due to the presence of fine-grained unconsolidated material such as silt or clay. Often a spatial relationship can be seen between lake sediment anomalies and glaciofluvial deposits such as eskers. In general, the sample collection and preparation protocols employed by the OGS, when properly carried out, minimize the deleterious effects of exotic inorganic materials which may be present in the survey areas.

Not all spatial trends in geochemistry are due to lithological or mineralogical factors. The solubility of trace metals depends to a large extent on the geochemical matrix and, in particular, on pH and oxidation-reduction (redox) conditions. Redox conditions in a lake are usually controlled by thermal conditions which, in turn, are controlled by lake morphology and lake depth. If conditions are suitable for an element to preferentially partition into the lake sediment, factors that may influence (enhance) the concentration of the element include the abundance of Fe, Mn and organic material. The mechanisms that may lead to "false anomalies" include sorption (scavenging) by hydrous oxides of Fe and Mn and the affinity of some elements to form organo-metallic complexes. Enrichment of some elements in the shallow (surface to 10 cm deep) sediment due to the upward migration and precipitation/concentration of Fe and Mn (and other trace elements such as Co, Pb, Mo and Zn originally co-precipitated with Fe and Mn) can occur. The OGS sampling technique avoids the surface sediment and targets the deep (>20 cm) sediment thereby minimizing the effects of Fe, Mn and base metal enrichment that may occur in the surface sediment. The assumption that sedimentation rates in all sampled lakes are similar, and that these lake bottom sediments are undisturbed at the time of sampling may not always be valid. Slumpage of sediments, mudslides, the effects of wavebase and the activities of animals may introduce the possibility that a "mixed" (shallow and deep sediment) sample was collected.

The magnitude of an anomaly, perhaps surprisingly, is one of the least important assessment criteria. Magnitude depends not only on the size of a deposit or occurrence but on its distance from the lake, the presence and effectiveness of sinks between the source and lake, the limno-geochemical conditions in the lake, the weatherability of the deposit and the character of the surficial deposits (i.e., level of carbonate). The weatherability depends on factors such as exposure, depth of burial and the specific mineralogy of the source. These factors combine to make magnitude an unreliable estimate of the importance of an anomaly except in extreme cases or in cases where multiple samples and/or media corroborate its importance.

Multi-site anomalies provide separate verification of the "anomalousness" of a given area and provide some insurance against non-systematic errors in sample quality, collection, preparation or analysis. However, since samples are collected, prepared and analysed in sequence, a uniform and numerically sequential anomaly may be the result of a systematic analytical or sample preparation error. This might be expected to produce an apparent geographic grouping of fairly uniform concentrations in one, or possibly several, elements. Every effort has been made to detect this kind of problem but the user is reminded to consider all available data when assessing the importance of an anomaly.

Multi-element anomalies with geologically reasonable elemental assemblages are useful in assessing the importance of many anomalies. For example, Pt and Pd are relatively immobile in the surficial environment compared to base metals such as Cu, Ni, Pb and Zn, and would not normally be expected to be found in anomalous levels in a lake sediment without an accompanying base metal signature. However, certain multi-element anomalies (e.g., Mo + Zn) can sometimes result from limnological factors (e.g., redox conditions related to deep lakes, relative level of organic material in the sediment).

Results from the water quality data set, water analyses and sediments analyses are plotted on bedrock geology (OGS 2003) as proportional dot maps in appendices A and B. Not all elements analysed for lake sediment are available for lake waters, and small data sets (results were mostly below detection limit) were not plotted. Appendix A contains proportional dot plots for water pH, water electrical conductivity, sediment loss-on-ignition (LOI), and sediment sampling depth. Appendix B contains lake water and lake sediment dot plots for the following: Ag, Al, As, Au, Ba, Be, Br, Ca, Cd, Co, Cr, Cs, Cu, Fe, Ga, Hf, Hg, K, Li, Mg, Mn, Mo, Na, Nb, Ni, P, Pb, Rb, S, Sb, Sc, Sn, Sr, Total REEs, Ta, Th, Ti, Tl, U, V, W, Y, Zn and Zr. Appendix C contains the analytical data for 19 parameters of interest, and includes UTM coordinates in datum NAD 83, Zone 17N. Although this report contains a subset of the geochemical data set, along with preliminary data interpretation and discussion of the data, the digital data release (MRD–150; available separately from this report) contains the whole geochemical data set for the South Swayze survey area.

The average pH and conductivity for surface waters (0.5 to 2 m depth) are 6.8 and 31 μS/cm, respectively. The pH ranges from 3.7 to 9.5 and the median value of 6.9 correlates well with the average value. The distribution of pH values over areas of exposed or thinly drift-covered bedrock geology (Appendix A) shows a general pattern of low pH over felsic rocks and higher values over mafic rocks (in the extreme northeast and southwest corners). Lakes underlain and surrounded by organic-rich deposits, such as bogs, also exhibit low pH values. Extreme pH values of <6.0 and >8.5 make up less than 15% of the lakes in the study area.

The electrical conductivity (EC) values range from <10 to 235 μS/cm, with 90% of the lakes less than 49 μS/cm. The distribution of EC values over areas of thicker surficial deposits, generally > 1 m (*see* Appendix A) shows a correlation of high conductivity in the vicinity of roads, especially in the northeastern portion of the study area along Highway 144. Only 20 sites account for EC values over 100 μS/cm. Lakes overlying glaciofluvial ice contact and outwash deposits in the northeastern portion of the study tend to be more alkaline (higher pH values) and have higher EC, and have anomalous lake sediment concentrations of Ca and Mg, suggesting the presence of carbonates in the surficial sediment.

The depth at which sediment samples were collected is recorded and plotted over bedrock geology base (*see* Appendix A). Despite the rugged topography in some regions of the survey area, the median lake depth at which lake sediment was collected is 4 m. Approximately 90% of the lake sediment samples were collected at less than 10 m depth. The sampling depth indirectly reflects the depth of the lake, since the sampling protocol requires that the profundal (deepest part) basin of the lake be sampled. The deep lakes are distributed mostly on bedrock-controlled terrain in the southwestern part of the survey. However, the deeper lakes in the northeastern section are lined up along north-trending glaciofluvial ice contact deposits and faults, approximately parallel to Highway 144 (Neville to Chester townships; St. Louis to Benneweiss townships).

A correlation matrix (created in Microsoft ® EXCEL) yielded a high correlation coefficient between Fe and Mn (r^2=0.46). Both correlated positively with base metal concentrations in the lake sediments: Cu, r^2=0.15; Ni, r^2=0.36; Co, r^2=0.59; Cr, r^2=0.47; Zn r^2=0.33; total REEs, r^2=0.53; (correlation coefficients with respect to Fe). These base metal concentrations are also positively correlated to each other.

The distribution of gold (by INAA) in lake sediments of the South Swayze area survey occurs in a trend east-west across the metavolcanic-metasedimentary assemblages of the SGB, from Potier to Chester townships. Fifty-seven sample sites returned gold values above the detection limit (2 ppb) and 15 of these were above 4 ppb. Only 5 sites returned highly anomalous concentrations of gold in lake sediment: site 43 (7 ppb), site 921 (10 ppb), site 799 (16 ppb), site 930 (19 ppb), and site 855 (225 ppb). The results for site 855 should be treated with caution because the high Ag and Au signature does not give the typical pathfinder elements associated with true anomalies, rather, the sediments show high levels of Mg, Hg, and Cu.

The distribution of lake sites with highly anomalous concentrations of Mn are intimately tied to anomalous values of Fe in lake sediments. There is an obvious trend of anomalous Fe±Mn along northwest-trending faults in the northeast; whereas in the southwestern part of the study area, the lake sites anomalous in Fe±Mn tend to line up with northeast-trending dikes. This trend occurs regardless of lake sampling depths and does not necessarily line up with lineations created by magnetic anomalies in total magnetic field survey data (OGS 1999).

Copper anomalies are spatially associated with the mafic to intermediate volcanic rocks of Ethel and Gladwin townships in the southwest and with the gabbroic rocks of the SGB in the northeast part of the study area. The highest values of copper occur in Ethel Township (site 91, >500 ppm), and in Chester Township (site 831, 213 ppm; site 897, 207 ppm; site 855, 195 ppm). There is an obvious absence of elevated copper concentrations in the southwest-central part of the survey area over the migmatized supracrustal rocks.

Nickel anomalies are spatially distributed over 3 areas of bedrock containing significant mafic components: the mafic to intermediate volcanic rocks of Ethel and Fulton townships; sporadically in the vicinity of the migmatized supracrustal rocks (Breadner, Bazett and Cavana townships); and over the metavolcanics of the SGB to the northeast in Chester and Benneweis townships. The highest concentrations of Ni occur in Ethel and Fulton townships (site 91, >150 ppm and site 116, 41 ppm, respectively). Schist Lake, at the border between Yeo and Potier townships, returned one of the highest Ni results in the SGB (site 1028, 40 ppm).

Molybdenum anomalies follow a similar pattern to the above, with the highest concentrations occurring in Gladwin and Earl townships (site 141, 28.4 ppm and site 539, 28.3 ppm). Site 464 shows elevated concentrations of Mo (4.8 ppm) and is situated close to the Ramsey Lake Mo occurrence in Elizabeth Township (OGS 2004). Molybdenum anomalies in the SGB are found in St. Louis Township (site 807, 28.3 ppm), Invergarry Township (site 1015, 9.6) and at Schist Lake in Potier Township (site 1028, 9.1 ppm).

Titanium anomalies are distributed over dominantly migmatized supracrustal rocks (Kelso-Earl-McPhail-Specht townships) and mafic to intermediate volcanic rocks (Ethel and Gladwin townships). Elevated concentrations of Ti are sparse in the northeast corner and when they are found they tend to line up along faults. The highest values of Ti occur in Earl Township: site 223, 665 ppm; site 222, 565 ppm; site 526, 541 ppm. Titanium anomalies are also clustered over the Margaret Stock of the Ramsey-Algoma Grantoid Complex in Margaret-McPhail-Bazett townships (site 232, 646 ppm; site 626, 466 ppm; and site 628, 447 ppm).

Some single-metal anomalies line up along the Canadian Pacific railway going through Breadner, Cavana, Bazett, Lillie and Margaret townships. These outliers may be due to activities of the railway in the region. Other lone base metal anomalies line up along dikes and faults.

Anomalous levels of precious and base metals in lake sediments, according to proportional dot plots (*see* Appendix B) are distributed primarily over 3 very distinct regions in the South Swayze survey area: the metasedimentary-metavolcanic complex of the SGB; in localized areas over migmatitic rocks in Earl-McPhail townships; and over the east-trending mafic to intermediate metavolcanic rocks that stretch from Fulton to Durban townships. The anomalous lake sites have been grouped into areas by watershed according to the criteria listed above and are discussed in the following section.

Description of Selected Anomalous Areas

The following section is a summary of the most significant multi-element and/or multi-site precious and base metal anomalous areas within the South Swayze survey area. They have not been ranked. The most significant Cu and Ni anomalies, in terms of multi-site and multi-element character, are listed below. The approximate areal extent of the anomalous areas is outlined in Figures 4 and 5. A bedrock geology base was used for Figure 4, while the land tenure status as of December 31, 2004 is depicted on Figure 5. Note that some base metal anomalies exist in the data set that are not listed or discussed below.

The "±" symbol is used in the area description for a particular element that is present at elevated to anomalous levels in some, but not all, of the sample sites in the area discussed. The term "background" is used to indicate the average (mean) concentration value of the element for the data set. The term "elevated " means above the 90th percentile, while "anomalous" means greater than the 95th percentile. Highly anomalous means greater than the 98th percentile. A total of 25 lake sediment samples with loss-on-ignition values of <10% were excluded from the data set that was used to generate the statistics and dot plots for this report. The data for these samples are included within the digital data release, MRD-150.

1. Hall Township	Au, Ag, Cu, Ni, Co, ±Cr; ±Fe, ±Mn; Be, Nb, total REEs; Ga, Sc, T, Tb, Ti, V, Y, Zr; As

This single lake anomaly, site 197, is designated anomalous by the presence of Au (3.5 ppb), high concentrations of Ag (0.41 ppm), Ni (38 ppm), Cu (66 ppm), and base metals such as Co (22 ppm) and Cr (70 ppm). It is characterized by the highest concentrations of total REEs (1087 ppm) for the study and is also highly anomalous in Nb and Th. The sediment was sampled at 6 m depth, however the sediment is highly anomalous in iron, greater than 13% Fe and elevated in Mn and As. The lake is located in a cluster of 4 lakes (sites 194, 195, 196 and 197), in a low lying area and connected to the others by streams and swamp land. The cluster overlies the Bardney Lake Batholith of the Ramsey-Algoma granitoid complex. Site 197 is the shallowest, however, the other lakes do not show comparable elevated concentrations of elements. The cluster is located just north of the Mississigi River Provincial Park and west of the logging road to the town of Ramsey. The anomalous lake site is situated on massive granodiorite bedrock while the others partially overlie glaciofluvial outwash deposits. The lack of evidence of the areal extent of the Ag, Au, Cu and Ni anomalies and the presence of highly anomalous concentrations of Fe and Mn in the sediment suggests a false anomaly and this site should be interpreted with caution. This area was open for staking as of December 31, 2004.

2. Abney Township
±Ag, ±Cu, ±Ni, ±Co, ±Cr, ±Pb, ±S, ±V, ±Sb, ±Zn; ±Ba, ±Rb, ±Sr, ±Th, ±Tl, ±U, ±Y, ±REEs, ±Br

sites 105, 300

The two lake sites, 105 and 300, are located in swampy terrain between Abney Lake and First Lake of the Mississagi River system, and overlie the Bardney Lake Batholith of the Ramsey-Algoma granitoid complex. Site 105 shows anomalous Ag (0.23 ppm), V (89.3 ppm), Cu (50.0 ppm) and Zn (107 ppm) and is elevated in Br and REEs. Within the same watershed, site 300 gives anomalous Ni (25 ppm) and Pb (18.8 ppm) and highly anomalous S (10414 ppm), Sb (0.3 ppm) and Tl (0.29 ppm) with elevated Co (11.4 ppm) and U (24.8 ppm). This area was open for staking as of December 31, 2004.

3. Cortez Township
±Au, ±Cu, ±Ni, ±Co, ±Cr; ±Fe, ±Mn; ±Cd, ±Sc, ±Ti, ±V, ±Pb, ±Sb, ±Zn, ±Zr; ±Be, ±Li, ±Nb, ±Rb, ±Sr, ±Th, ±U, ±Y, ±REEs; ±S

sites 107, 108, 109, 304, 310

This anomalous area is made up of a cluster of samples in the Beartrack Lake-Beartrack Creek area and overlies the Bardney Lake Batholith of the Ramsey-Algoma granitoid complex. Site 304 shows anomalous gold (4 ppb), but is lacking in many of the base metals found in the rest of the cluster. The sample is highly organic, however, it is marked by low concentrations of Fe and Mn. Site 304 is also elevated in Sr and U. Site 310 contains elevated to highly anomalous concentrations of the base metals: Cu (72 ppm), Ni (33 ppm), Co (14 ppm), Cr (40 ppm), V (71 ppm), Zn (114 ppm), Zr (15 ppm); as well as Nb, S, Rb, Sc, Ti, Th, U and the REEs. This site is adjacent to an esker, and is anomalously rich in Fe. The remaining sites, 107, 108 and 109, located in Beartrack Lake, contain gold concentrations at just above detection limit, and are also elevated in Ni, Cr, Rb, Sc, Ti, Th and U. These sediments are anomalously high in Fe and approach elevated concentrations of Mn. This area was open for staking as of December 31, 2004.

4. Gladwin Township
±Ag, ±Ni, ±Nb, ±Pb, ±Ti, ±Rb, ±Sr, ±Th, ±U, ±REEs; ±Ba, ±K

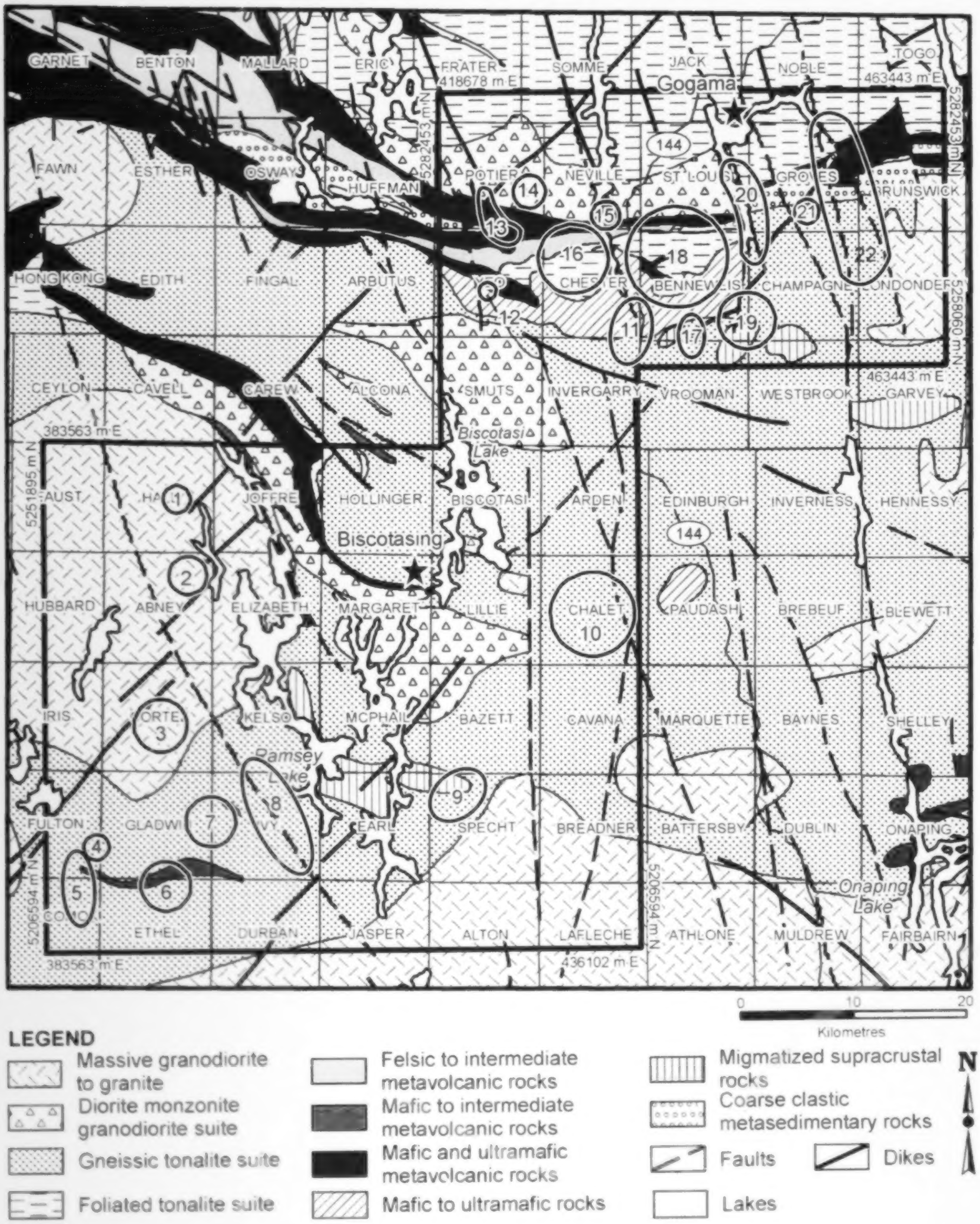
sites 321, 322, 324

This anomalous area shows elevated concentrations of Ag (site 321 only), Ni, Ti, Nb, Pb and U in the Gladwin Creek-Gladwin Lake area. This cluster of sampled lakes is underlain by granite gneisses of the Ramsey-Algoma granitoid complex. This area was open for staking as of December 31, 2004.

5. Fulton-Comox townships
±Ag, ±Cu, Ni, ±Co, Cr; ±Fe, ±Mn; ±V, ±Pb, ±Sb, ±Ti, ±Zn; ±S; Be, ±Rb, ±Th, ±U, ±REEs; ±Ba

sites 116, 118, 123, 127, 128

This cluster of lakes is located between Limit and Hope lakes straddling Fulton and Comox townships and is situated at the western limit of a sliver of mafic to intermediate metavolcanic rocks (Rogers 1962) in granitic terrane. Most of the lakes show elevated concentrations of Ag, Cu, Ni and are highly anomalous in Co and Cr. These sites are associated with relatively high concentrations of Fe and Mn. This area was open for staking as of December 31, 2004.


GARNET
BENTON
MALLARD
ERIC
FRATER
418678 m E
SOMME
JACK
Gogama
NOBLE
TOGO
463443 m E
5282453 m N
5282453 m N
144
FAWN
ESTHER
OSWAY
HUFFMAN
POTIER
NEVILLE
ST. LOUIS
GROVES
BRUNSWICK
HONG KONG
EDITH
FINGAL
ARBUTUS
YEO
CHESTER
BENNEWEIS
CHAMPAGNE
LONDONDERRY
5258060 m N
463443 m E
CEYLON
CAVELL
CAREW
ALCONA
SMUTS
INVERGARRY
VROOMAN
WESTBROOK
GARVEY
383563 m E
5251895 m N
Biscotasi Lake
AUST
HALL
JOFFRE
HOLLINGER
BISCOTASI
ARDEN
EDINBURGH
INVERNESS
HENNESSY
Biscotasing
144
HUBBARD
ABNEY
ELIZABETH
MARGARET
LILLIE
CHALET
PAUDASH
BREBEUF
BLEWETT
IRIS
FORTE
KELSO
MCPHAIL
BAZETT
CAVANA
MARQUETTE
BAYNES
SHELLEY
Ramsey Lake
FULTON
GLADWIN
IVY
EARL
SPECHT
BREADNER
BATTERSBY
DUBLIN
ONAPING
5206594 m N
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Onaping Lake
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DURBAN
JASPER
ALTON
LAFLECHE
ATHLONE
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FAIRBAIRN
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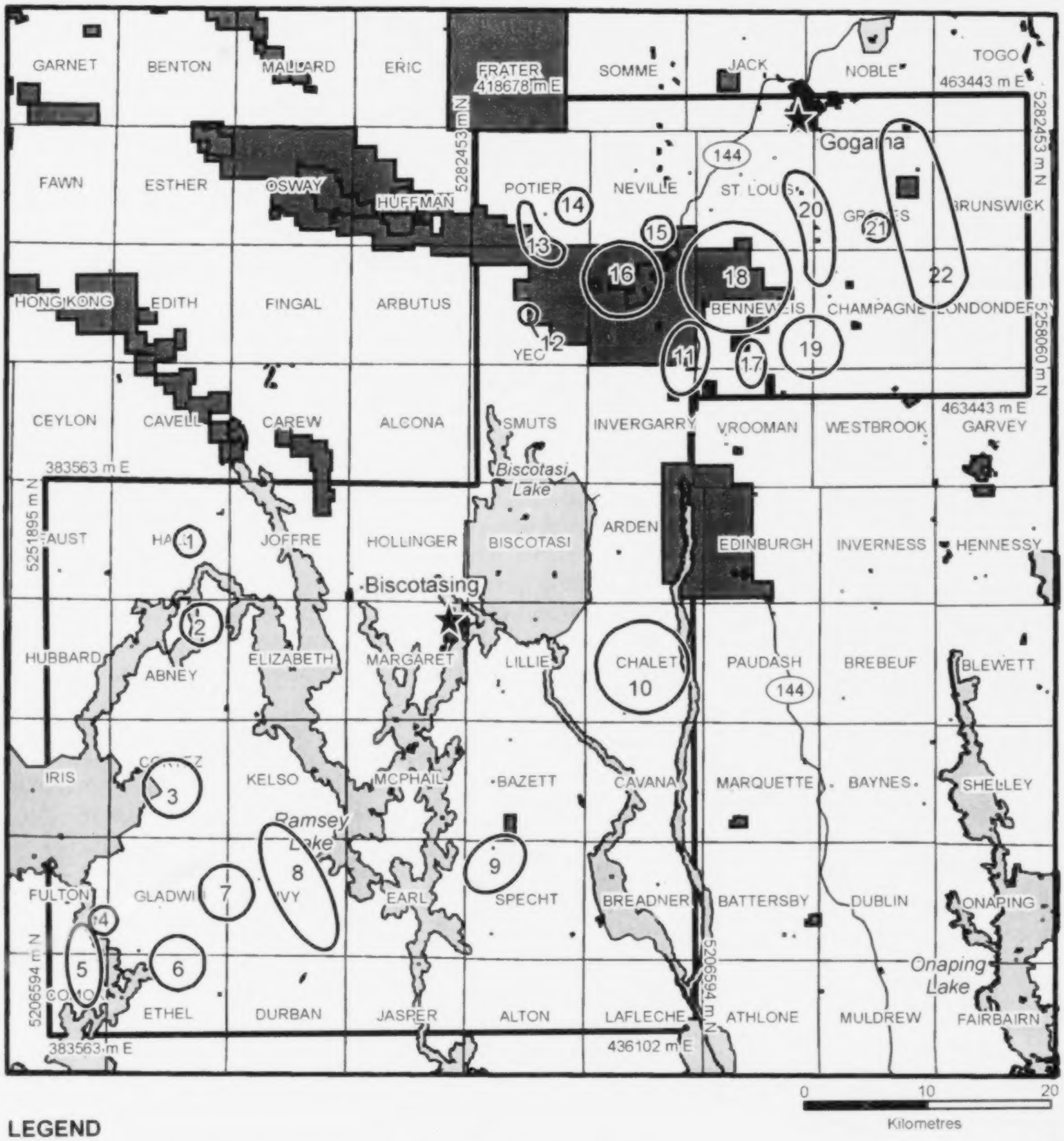
Kilometres
LEGEND
Massive granodiorite to granite
Diorite monzonite granodiorite suite
Gneissic tonalite suite
Foliated tonalite suite
Felsic to intermediate metavolcanic rocks
Mafic to intermediate metavolcanic rocks
Mafic and ultramafic metavolcanic rocks
Mafic to ultramafic rocks
Migmatized supracrustal rocks
Coarse clastic metasedimentary rocks
Faults
Dikes
Lakes
N

Figure 4. Location of selected geochemically anomalous areas within the South Swayze lake sediment and water survey area.


GARNET
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TOGO
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5282453 m N
FAWN
ESTHER
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HUFFMAN
5282453 m N
POTIER
NEVILLE
144
ST. LOUIS
Gogama
GRAVES
BRUNSWICK
HONG KONG
EDITH
FINGAL
ARBUTUS
YEO
BENNEWEIS
CHAMPAGNE
LONDONDERRY
5258060 m N
CEYLON
CAVELL
CAREW
ALCONA
SMUTS
INVERGARRY
VROOMAN
WESTBROOK
463443 m E
GARVEY
383563 m E
5251895 m N
Biscotasi Lake
FAUST
HALL
JOFFRE
HOLLINGER
BISCOTASI
ARDEN
EDINBURGH
INVERNESS
HENNESSY
Biscotasing
HUBBARD
ABNEY
ELIZABETH
MARGARET
LILLIE
CHALET
PAUDASH
144
BREBEUF
BLEWETT
IRIS
CORTEZ
KELSO
MCPHAIL
BAZETT
CAVANA
MARQUETTE
BAYNES
SHELLEY
Ramsey Lake
FULTON
GLADWIN
IVY
EARL
SPECHT
BREADNER
BATTERSBY
DUBLIN
ONAPING
5206594 m N
COMO
ETHEL
DURBAN
JASPER
ALTON
LAFLECHE
5206594 m N
ATHLONE
MULDREW
Onaping Lake
FAIRBAIRN
383563 m E
436102 m E
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Kilometres

LEGEND

■ Areas withdrawn from staking (unregulated parks, protected areas, etc.)

▨ Staked land as of December 31, 2004 (includes patents and leases).

□ Provincial Parks and Conservation Reserves (all regulated parks).

Note: This figure is intended to represent the approximate state of the land tenure in the South Swayze survey area as of December 31, 2004. It is not a legal description and cannot be used as a substitute for the files of the regional Mining Recorder.

N

Figure 5. Land tenure map (to December 31, 2004) of the South Swayze lake sediment and water survey area showing the geochemically anomalous areas described in the report.

6. Ethel Township	±Ag, ±Ni, ±Co, ±Cr, ±Cu; ±Fe, ±Mn; ±Hg, ±V, ±Pb, ±Sb, ±Zn; ±As, ±S; Be, ±Li, ±Rb, ±Sr, ±Th, Ti, ±Tm, U, ±REEs; ±Ba, K, ±Y

sites 71, 88, 89, 91, 267, 274, 276, 277

This cluster of lakes sit over the southern edge of an east-trending sliver of mafic to intermediate metavolcanic rocks (Rogers 1962). All sites are characterized by anomalous concentrations of Be, K, Ti and U. Site 91 has anomalously high concentrations of many base metals: it has the highest concentrations of Cu and Ni in the survey area (>500 ppm and >150 ppm), and the second highest concentration of Ag (0.97 ppm). The remaining sites show elevated concentrations of Ni, Ti, Co, Cr and only background levels of Cu. The sites 267, 274, 276 and 277 are distinct from the remaining group by the presence of Rb, Tm, Y and REEs. These 4 sites are proximal to the metavolcanic rocks. This area was open for staking as of December 31, 2004.

7. Ivy-Gladwin townships	±Ag, ±Cu, ±Ni, ±Co, ±Cr; ±Fe, ±Mn; ±V, ±Pb, ±Sc, ±Zn; ±S; ±Be, ±Nb, ±Sr, ±Th, ±U, ±REEs; ±Ba, ±Y

sites 255, 256, 259, 260, 446, 448, 449, 452, 455

This cluster of anomalous lakes lies within an area bound by Losian, Miniwaski and Phipps lakes on the boundary between Gladwin and Ivy townships. The lakes are underlain primarily by gneissic tonalite, except for sites 259 and 260 which are underlain by glaciofluvial outwash deposits. This anomalous area is characterized by elevated to anomalous concentrations of Be, Nb, Sc, REEs, U and Y, typical of felsic rocks in the area. Most sites are also elevated in Cu and some are highly anomalous in Ag (range 0.08 to 0.66 ppm). This area also has one of the highest concentrations of V (150 ppm at site 455) in the survey area. This area was open for staking as of December 31, 2004.

8. Ivy Township	±Au, ±Ag, Cu, ±Ni, Co, Cr; Fe, ±Mo, ±V; ±S; ±Th, ±U

sites 150, 152, 426, 428, 430, 431, 436, 437

All of the lakes in this anomalous area show elevated to anomalous concentrations of Ni and Cu. Site 436, also shows elevated levels of Ag (0.21 ppm), Au (4 ppb) and Co (10.5 ppm) with fairly weak signatures from other metals. These sites overlie a northwest-striking fault in gneissic tonalite, along the low-lying wetlands of Kitten and Miniwaski creeks. This area was open for staking as of December 31, 2004.

9. Specht Township	Ni, Co, Cr, Ti; ±Fe, ±Mn; Cs, K, Li, ±Nb, Mg, Rb

sites 574, 576, 577, 578, 680

A cluster of sites on Mishap and Como (site 680) lakes give consistent signatures of elevated Ni, Co, Cr and Ti with a marked absence of anomalous Cu. These lake sediments are also consistently anomalous in Cs, K, Li, Mg and Rb. The lakes are located at the boundary between migmatized supracrustal rocks and gneissic tonalite. This area was open for staking as of December 31, 2004.

10. Chalet Township	±Ag, ±Ni, ±Co, ±Cr, ±V, ±Ti; ±Fe, ±Mn; ±Zn; ±Li, ±Nb, ±P, ±Rb, ±Sr, ±Ba

sites 511, 558, 611, 612, 663

This cluster of anomalous sediments were taken from Bushtail (site 612) and Rumsay lakes located between the 2 arms of the Spanish River in Chalet Township. All sites except 612 are located in swampy terrain overlying tonalitic gneiss bedrock. Site 558 shows elevated concentrations of Ag and Cr along with anomalous levels of Co, V, Ba, Nb, P and Sr. This site also has highly anomalous levels of Fe and Mn. The other lakes in the cluster show elevated levels of Ni and Cr with Rb. None of the sites show high concentrations of Cu. This area was open for staking as of December 31, 2004.

11. Invergarry-Chester townships	±Au, ±Ag, ±Cu, ±Ni, ±Co, ±Cr; ±Fe, ±Mn; ±Cd, ±V, ±Sb, ±Zn; ±As, ±S; ±Be, ±Mo, ±Rb, ±Sr, ±Th, ±Ti, ±REEs; ±Ba, ±Y, ±Br

sites 831, 834, 835, 836, 838, 839, 897, 898, 899, 962, 1015

This cluster of lakes follows a northerly trend parallel to Highway 144. This area is underlain by glaciofluvial ice-contact deposits that in turn overlie the mafic-ultramafic rocks of the SGB. The sediments are characterized by elevated Ag, Ni, Cu, Cr, V and Ti. Elevated levels of As, S, Fe and Mn are also present. Site 839 has one of the highest concentrations of Mn (>12000 ppm) in the study area. Sites 962 and 1015, in the bays of Dividing Lake in Invergarry Township are anomalous in Cu. Sample 1015 is highly anomalous in Cr (160 ppm), V (152 ppm), As (28 ppm), Mo (9.6 ppm), S (6344 ppm) and Sb (0.35 ppm) but not in Ni. Gold was found in sites 831 (4 ppb) and 897 (3 ppb). However, these sites (831 to 899) are also characterized by high levels of Fe and Mn and caution should be taken in the interpretation of these anomalies. The area as of December 31, 2004, was not available for staking.

12. Yeo Township	Ag, Cu, Cd, Hg, ±Mo

sites 1035, 1042

These 2 lakes sit over the boundary between the migmatitic unit and the mafic-ultramafic rocks of the SGB. This area is anomalous in Cu (66 and 55 ppm) and elevated in Ag (0.24 ppm, both), for sites 1035 and 1042, respectively. These sites also show elevated levels of Cd and Hg. The area around site 1042 was staked as of December 31, 2004.

13. Schist Lake	±Au, ±Ag, Cu, Ni, ±Co, ±Cr; ±Sb, ±Zn ±Zr; ±As, ±S

sites 929, 1017, 1019, 1023, 1025, 1026, 1027, 1028

This anomalous area overlies the northern limb of the mafic to ultramafic metavolcanic package of the SGB (Heather, Shore and van Breemen 1995), and sits over a magnetic high as evidenced in a total magnetic field map of the area (OGS 1999). All of the sites are located on Schist Lake (Potier Township) except for site 1023 which is a pond draining into the lake. Most of the samples returned background values of Au except for site 929 (5 ppb) and site 1027 (6 ppb). Sites 1017 and 1028 showed elevated concentrations of Ag (0.20 and 0.24 ppm, respectively). The lake sediments in this area are all elevated to anomalous in Ni and Cu with most sites elevated in As and S. Only some sites show anomalous concentrations of Co, Cr and Zn. Schist Lake Gold, Trail Creek gold and iron, Cryderman-Moore Lake, Silver Butte and Moore Lake occurrences of gold are located just south of sites 1017 and 1028. Many more occurrences of gold and copper are situated south of Schist Lake (OGS 2004). The areas to the south and southwest of Schist Lake are not available for staking. The area around site 1025 was available for staking as of December 31, 2004.

14. Potier Township	±Au, Cu, ±Ni, ±Cr; ±Fe; ±V, ±Zn; ±S; ±Be, ±Nb, ±Th, ±Tl, ±REEs; ±Y, ±Br

sites 944, 947, 949

This cluster of lakes is located south of Wolf Lake and north of Schist Lake. This anomalous area showed 4 ppb Au, and high concentrations of Cu (51 to 157 ppm). The highest values in the survey of V (> 180 ppm) were obtained at site 944, which also had elevated Cr, Be, Nb and REEs. The area overlies granitic rocks of the Neville Pluton (Heather, Shore and van Breemen 1995). This area was available for staking as of December 31, 2004.

15. Neville Township	Cu, Ni, Co, Cr; Fe, Mn; ±V, ±Pb, ±Sc, ±Zn; ±As, ±P; ±Ce, ±Li, ±Rb, ±Th, ±REEs; ±Ba, ±Cs, ±Nb, ±Tl

sites 879, 880, 881

All 3 sites are located at the south end of Mesomikenda Lake which straddles the boundary between the mafic and intermediate metavolcanic rocks of the SGB and the granitic Neville pluton (Heather, Shore and van Breemen 1995). The sediments are elevated in Cu, Ni, Co, Cr and also contain high concentrations of P and As. These sites are also anomalous in Fe and Mn. The area north of site 881 was open for staking as of December 31, 2004.

16. Chester Township	±Au, ±Ag, Cu, ±Ni, ±Co, ±Cr; ±Fe, ±Mn; ±Hg, ±V, ±Pb, ±Sb, ±Zn; ±As, ±S; ±REEs; ±Br

sites 854, 855, 856, 862, 887, 920, 921, 922, 957, 958

This cluster of anomalous lake sites overlies the Chester granitoid complex (Heather 1993) and returned the highest values of Au in this study. Site 855, a pond in the Three Duck Lake system returned 225 ppb Au, along with elevated to anomalous results for Ag (0.27 ppm), Cu (195 ppm), Ni (21 ppm) and Hg (1.3 ppm). Other sites with significant values of gold are 920 (5 ppb) and 921 (10 ppb). Copper anomalies were found at all sites, with anomalous Cr and Ni present only in a few of the sites. The current Mineral Deposit Inventory database (OGS 2004) indicates the presence of many gold-bearing occurrences and prospects in the area. This area was not available for staking as of December 31, 2004.

17. Benneweis-Vrooman townships	Cu, Ni, Cr; ±Fe, ±Mn; ±Mo, Zr; As, S; ±Cd, ±Ca, ±Sb

sites 21, 22, 28

The lake sediments samples from Mollie Lake returned consistently high values of Cu, Ni, Mo and Zr. They were also highly anomalous in As and S. The lake overlies a glaciolacustrine deposit of sand and gravel, which in turn is underlain by a diabase dike. The Texas Gulf DDH B2 occurrence lies just to the north of site 28 (OGS 2004). The area immediately adjacent to the lake was still open for staking as of December 31, 2004.

18. Benneweis Township Cu, ±Ni, ±Co, ±Cr; ±Fe, ±Mn; ±Hg, ±Mo, ±Pb, ±Sb, ±Zn; ±As, ±S

sites 827, 829, 773, 778, 782; 715, 716, 770, 805, 808, 813, 814, 815, 816, 817, 818, 819, 826

All of the lakes in Benneweis Township show highly anomalous concentrations of Cu and most also showed elevated levels of Mo. However, the lakes to the south (sites 827, 829, 773, 778 and 782), located in the mafic and ultramafic rocks of the SGB, have associated Fe, Ni and Co; whereas, to the north (remaining sites) over the more felsic Chester granitoid complex, the signature lacks Fe and Co and instead shows high concentrations of Hg. Many of these sites are adjacent to existing occurrences of Cu and Au: Bernice Lake copper, Benneweiss Lake copper, and Broken Hill DDH #2 (OGS 2004). As of December 31, 2004, most of the area was not available for staking.

19. Benneweis-Champagne townships ±Cu, ±Ni, ±Co, Cr; Fe, Mn; ±Mo, ±Hg, ±V, ±Pb, ±Sb, ±Zr; As, S; Ca, ±Th, ±REEs; ±Ba, ±Y, Br

sites 8, 9, 23, 348, 351

This cluster of lakes along the Makwa Creek in Benneweis Township returned anomalous values for Cr, Mo, V, Hg and Sb. Site 8 gave one of the highest values for Zr (> 20 ppm) in the study area. All sites were also elevated in Br, As, S, Ca, Fe and Mn. The Williamson-Champagne gold occurrence is located northeast of site 351. This anomalous area straddles the migmatized metavolcanics, granites, and the ultramafic rocks of the SGB. This area was open for staking claims as of December 31, 2004.

20. St. Louis Township Cu, ±Ni, Co, Cr; ±Fe, ±Mn; ±Cd, Hg, V, ±Sb, ±Zn; ±As; ±Be, ±Cs, ±Li, ±Nb, ±Rb, ±Th, ±REEs; ±Ba, ±Mg

sites 719, 720, 721, 722, 723, 766, 767

All of the samples in this anomalous area were collected from the southern end of Mesomikenda Lake, located southwest of the town of Gogama. The lake overlies several faults and a small glacial outwash deposit is situated just to the northeast of the lake. Most of the samples are low in organic matter (LOI ranges from 17% to 31%), however, some samples contain anomalous concentrations of Fe and Mn. Some of the sites were elevated in Cu and Cr, as well as V, Cs and Zn. Some of the sites had anomalous levels of As, Rb, Nb, Li, Cd and Mg. Railway copper and Jarvis gold occurrences lie to the east of this area (OGS 2004). This area was available for staking as of December 31, 2004.

21. Groves Township ±Ag, ±Cu, ±Ni, ±Co, ±Cr; ±Mn; ±Sc, ±Zn; ±As, ±S; ±Be, ±K, ±Li, ±Rb, ±REEs; ±Ba, ±Na, ±Y, ±Br

sites 403, 724, 734, 735, 736, 737

Samples collected from the Jessica and Piggott lake system returned elevated levels of Ag, Cu, Ni and Cr. The sediments also show elevated concentrations of Na, K and Rb. The Tasmijopen Claim, Cu, Ag and Zn occurrence lies just north of site 734. This anomalous area straddles the boundary between the Timiskaming metasedimentary rocks and the gneissic tonalite. This area was available for staking as of December 31, 2004.

22. Groves Lake area	±Au, ±Cu, ±Ni, ±Co, ±Cr; ±Fe, ±Mn; ±Hg, ±V, ±Nb, ±Pb, ±Sb, ±Zn; ±As, ±S; ±Be, ±Li, ±Rb, ±Sr, ±Th, ±U, ±REEs; ±Ba, ±Y, ±Br

sites 43, 45, 361, 366, 367, 385, 395, 397, 398, 402, 740, 741, 744, 746, 750, 752, 754, 755, 756, 757, 759, 760

These anomalous lake sites line up along 2 northwest-trending faults that make up the lake systems containing Groves, Hanover and Londonderry lakes and Shuller Lake in Groves Township. These faults are crossed by diabase dikes. The area is predominantly underlain by tonalite gneiss where it is in contact with the narrowing SGB. Sites 43 and 746 returned Au concentrations of 7 and 3 ppb, respectively. The sediments are also anomalous in Cu, Ni, Co and Cr. Some sample sites show enrichment in Fe and Mn. The sites are elevated in V, Nb and Zn. The area surrounding sites 740 to 759 was not available for staking, however, other parts of the area were still available December 31, 2004.

Conclusions

Anomalous levels of precious and base metals in lake sediments are distributed primarily over 3 distinct regions in the South Swayze survey area (*see* Appendix B): the metasedimentary-metavolcanic complex of the SGB; in localized areas over migmatitic rocks in Earl-McPhail townships; and over the east-trending mafic to intermediate metavolcanic rocks that stretch from Fulton to Durban townships. This lake sediment geochemical survey identified 22 potential areas for further exploration in Ni, Cu, Co and Cr (*see* Figures 4 and 5). Areas with significant gold results are limited to those areas already identified with high potential for gold in the Potier-Benneweis area (OGS 2004).

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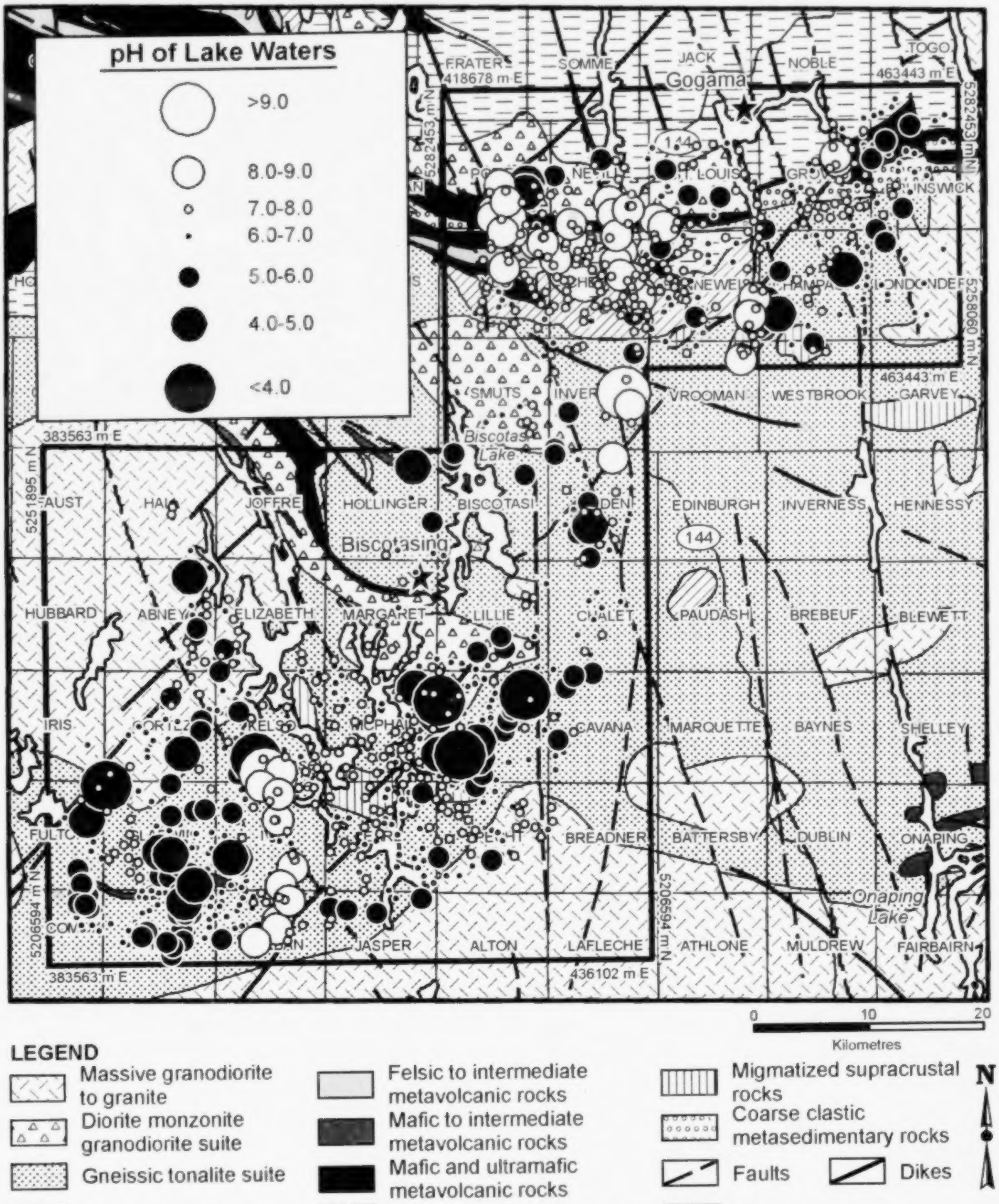
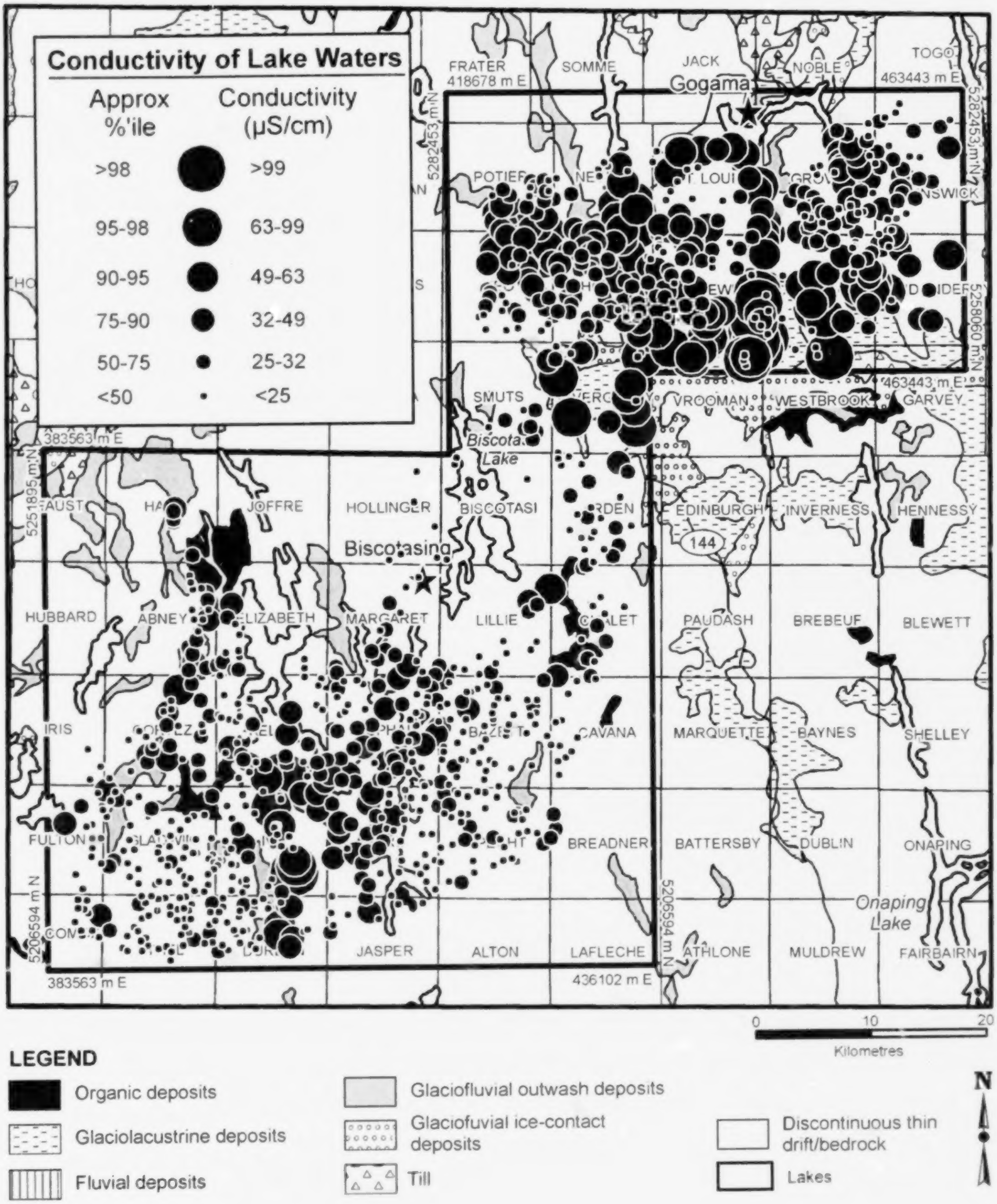
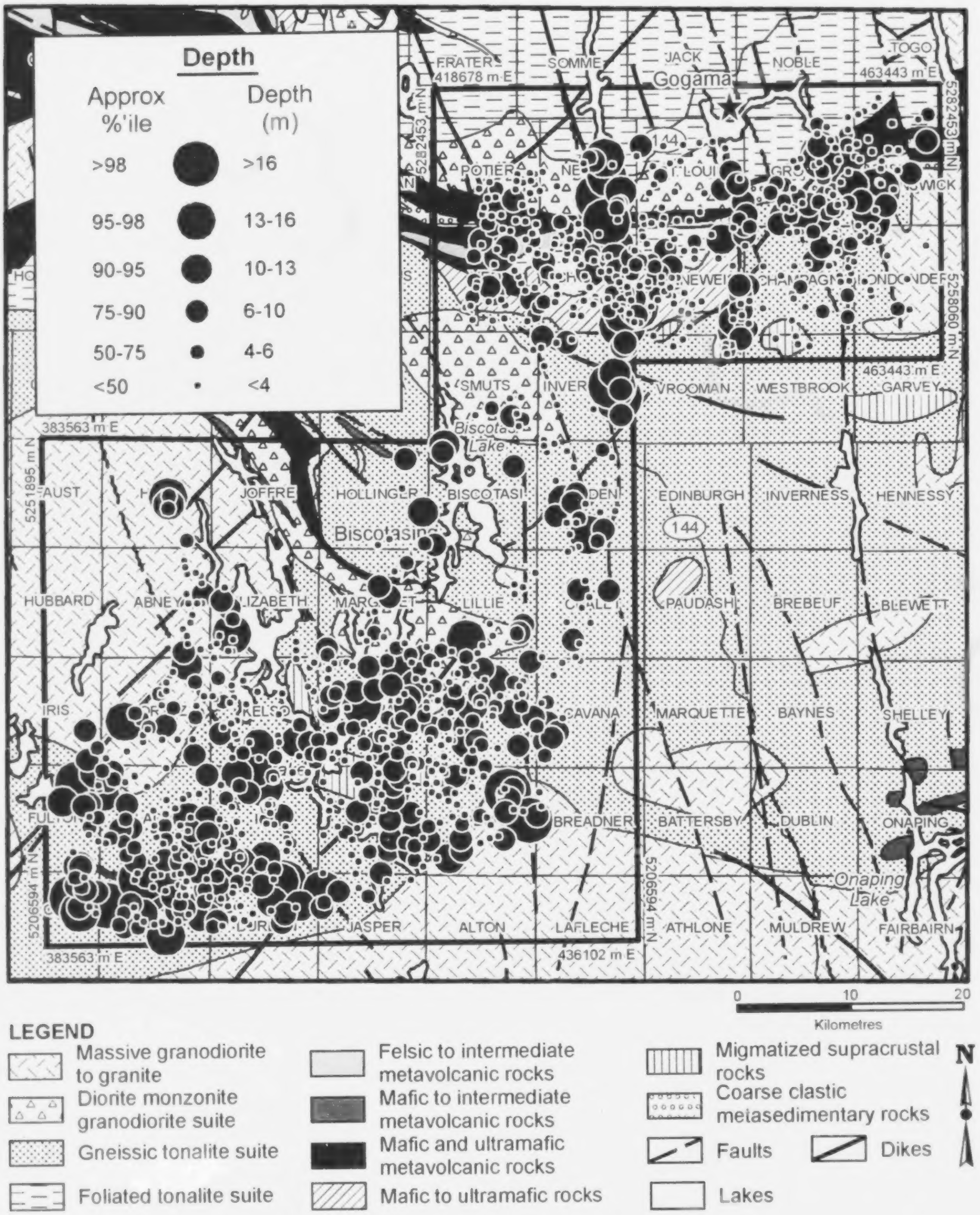
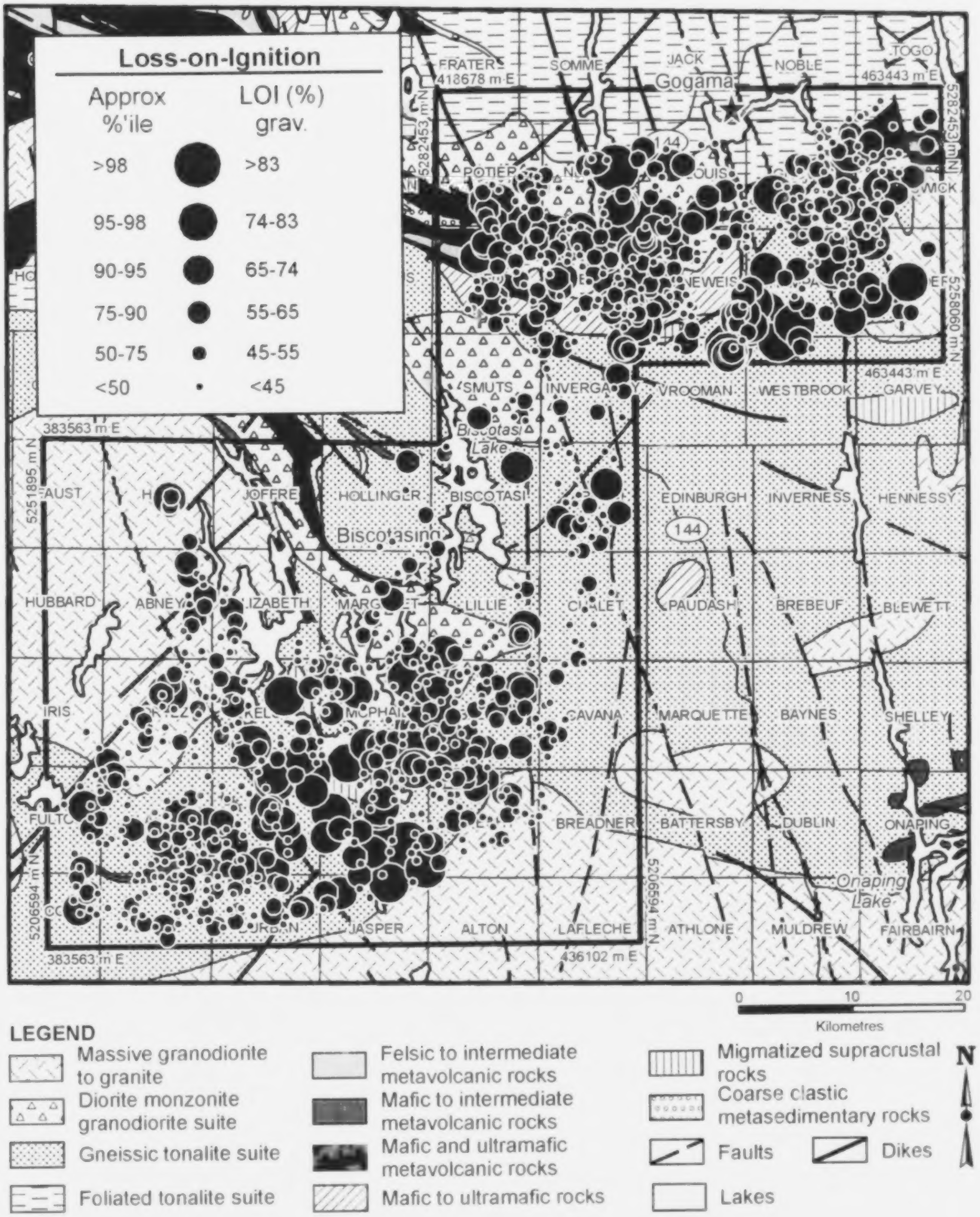
Appendix A

Proportional Dot Maps of Lake Water pH, Electrical Conductivity, Sediment Sampling Depths and Sediment Loss-On-Ignition (%LOI)


pH of Lake Waters
>9.0
8.0-9.0
7.0-8.0
6.0-7.0
5.0-6.0
4.0-5.0
<4.0
FRATER
418678 m E
SOMME
JACK
NOBLE
TOGO
463443 m E
Gogama
5282453 m N
5282453 m N
144
NEVILLE
ST. LOUIS
GROVES
BRUNSWICK
NEWELL
HAMPA
LONDONDERRY
5258060 m N
463443 m E
SMUTS
INVER
VROOMAN
WESTBROOK
GARVEY
Biscotasi Lake
383563 m E
5251895 m N
FAUST
HALL
JOFFRE
HOLLINGER
BISCOTASI
OGDEN
EDINBURGH
INVERNESS
HENNESSY
Biscotasing
144
HUBBARD
ABNEY
ELIZABETH
MARGARET
LILLIE
CHALET
PAUDASH
BREBEUF
BLEWETT
IRIS
CORTEZ
KELSO
MCPHAIL
CAVANA
MARQUETTE
BAYNES
SHELLEY
FULTON
BREADNER
BATTERSBY
DUBLIN
ONAPING
5206594 m N
5206594 m N
Onaping Lake
JASPER
ALTON
LAFLECHE
ATHLONE
MULDREW
FAIRBAIRN
383563 m E
436102 m E
0
10
20
Kilometres
LEGEND
Massive granodiorite to granite
Diorite monzonite granodiorite suite
Gneissic tonalite suite
Foliated tonalite suite
Felsic to intermediate metavolcanic rocks
Mafic to intermediate metavolcanic rocks
Mafic and ultramafic metavolcanic rocks
Mafic to ultramafic rocks
Migmatized supracrustal rocks
Coarse clastic metasedimentary rocks
Faults
Dikes
Lakes
N


Conductivity of Lake Waters
Approx %'ile
Conductivity (µS/cm)
>98
>99
95-98
63-99
90-95
49-63
75-90
32-49
50-75
25-32
<50
<25
FRATER
418678 m E
SOMME
JACK
Gogama
NOBLE
TOGO
463443 m E
5282453 m N
POTIER
GROVES
BRUNSWICK
5258060 m N
463443 m E
SMUTS
VROOMAN
WESTBROOK
GARVEY
Biscotasi Lake
383563 m E
5251895 m N
FAUST
JOFFRE
HOLLINGER
BISCOTASI
EDINBURGH
INVERNESS
HENNESSY
144
Biscotasing
HUBBARD
ABNEY
ELIZABETH
MARGARET
LILLIE
CHALET
PAUDASH
BREBEUF
BLEWETT
IRIS
CAVANA
MARQUETTE
BAYNES
SHELLEY
FULTON
BREADNER
BATTERSBY
DUBLIN
ONAPING
5206594 m N
Onaping Lake
JASPER
ALTON
LAFLECHE
ATHLONE
MULDREW
FAIRBAIRN
383563 m E
436102 m E
0
10
20
Kilometres
LEGEND
Organic deposits
Glaciolacustrine deposits
Fluvial deposits
Glaciofluvial outwash deposits
Glaciofuvial ice-contact deposits
Till
Discontinuous thin drift/bedrock
Lakes
N


Depth
Approx %'ile
Depth (m)
>98 >16
95-98 13-16
90-95 10-13
75-90 6-10
50-75 4-6
<50 <4
FRATER
418678 m E
SOMME
JACK
Gogama
NOBLE
TOGO
463443 m E
5282453 m N
POTIER
LOUI
GRO
WICK
NEWEI
CHAMPAGNE
ONDONDEF
5258060 m N
SMUTS
INVER
VROOMAN
WESTBROOK
463443 m E
GARVEY
383563 m E
Biscotasi Lake
FAUST
5251895 m N
JOFFRE
HOLLINGER
BISCOTASI
DENI
EDINBURGH
INVERNESS
HENNESSY
Biscotasing
144
HUBBARD
ABNEY
ELIZABETH
MARGARET
LILLIE
CHALET
PAUDASH
BREBEUF
BLEWETT
IRIS
KELSO
CAVANA
MARQUETTE
BAYNES
SHELLEY
FULTON
BREADNER
BATTERSBY
DUBLIN
ONAPING
5206594 m N
Onaping Lake
JASPER
ALTON
LAFLECHE
ATHLONE
MULDREW
FAIRBAIRN
383563 m E
436102 m E
0
10
20
Kilometres
LEGEND
Massive granodiorite to granite
Diorite monzonite granodiorite suite
Gneissic tonalite suite
Foliated tonalite suite
Felsic to intermediate metavolcanic rocks
Mafic to intermediate metavolcanic rocks
Mafic and ultramafic metavolcanic rocks
Mafic to ultramafic rocks
Migmatized supracrustal rocks
Coarse clastic metasedimentary rocks
Faults
Dikes
Lakes
N


Loss-on-Ignition
Approx %'ile
LOI (%) grav.
>98 >83
95-98 74-83
90-95 65-74
75-90 55-65
50-75 45-55
<50 <45
FRATER
418678 m E
SOMME
JACK
Gogama
NOBLE
TOGO
463443 m E
5282453 m N
POTIER
LOUIS
WICK
NEWEIS
5258060 m N
463443 m E
SMUTS
INVERGARY
VROOMAN
WESTBROOK
GARVEY
383563 m E
Biscotasi Lake
5251895 m N
FAUST
JOFFRE
HOLLINGER
BISCOTASI
EDINBURGH
INVERNESS
HENNESSY
Biscotasing
144
HUBBARD
ABNEY
ELIZABETH
MARGARET
LILLIE
CHALET
PAUDASH
BREBEUF
BLEWETT
IRIS
KELSO
MCPHAIL
CAVANA
MARQUETTE
BAYNES
SHELLEY
FULTON
BREADNER
BATTERSBY
DUBLIN
ONAPING
5206594 m N
Onaping Lake
JASPER
ALTON
LAFLECHE
ATHLONE
MULDREW
FAIRBAIRN
383563 m E
436102 m E
0
10
20
Kilometres
LEGEND
Massive granodiorite to granite
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Gneissic tonalite suite
Foliated tonalite suite
Felsic to intermediate metavolcanic rocks
Mafic to intermediate metavolcanic rocks
Mafic and ultramafic metavolcanic rocks
Mafic to ultramafic rocks
Migmatized supracrustal rocks
Coarse clastic metasedimentary rocks
Faults
Dikes
Lakes
N

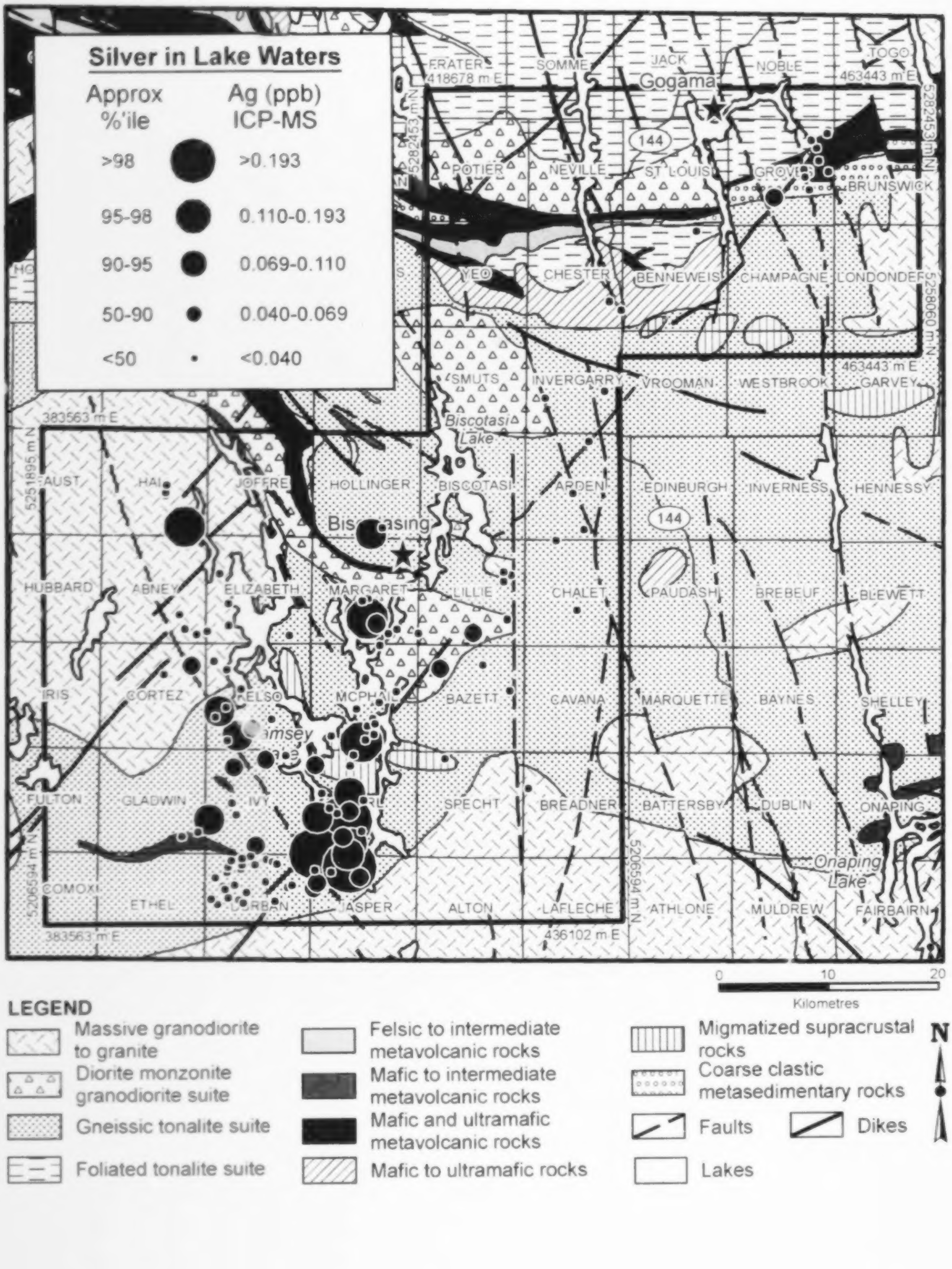
Appendix B

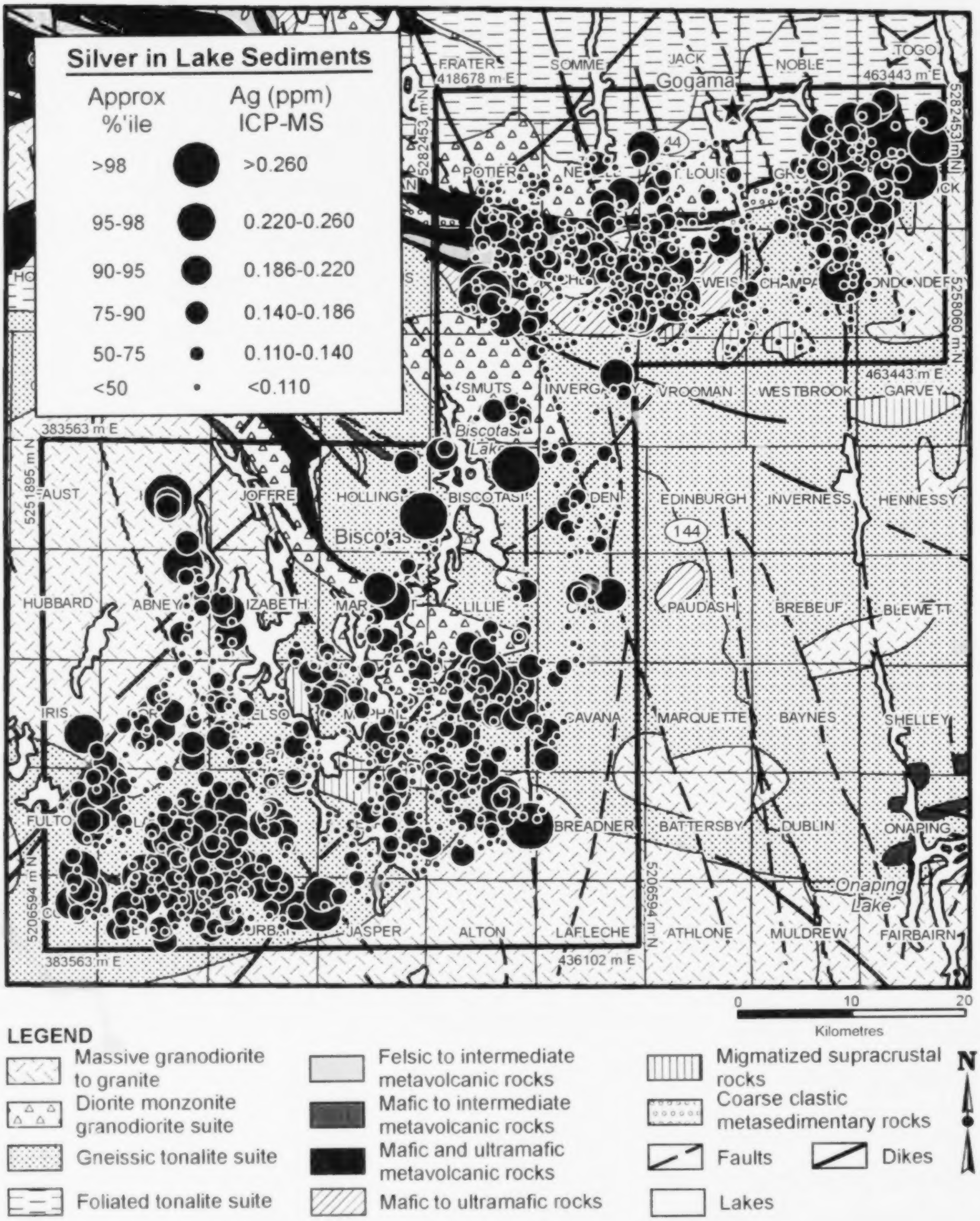
Proportional Dot Maps of Ag, Al, As, Au, Ba, Be, Br, Ca, Cd, Co, Cr, Cs, Cu, Fe, Ga, Hf, Hg, K, Li, Mg, Mn, Mo, Na, Nb, Ni, P, Pb, Rb, S, Sb, Sc, Sn, Sr, Ta, Th, Ti, Tl, Total REEs, U, V, W, Y, Zn, and Zr in Water and Sediment

NOTE:

The following elements were not analyzed in water: As, Br, Hf, Hg, Na, Nb, P, S and Ta.

Dot plots are excluded for elements where there were insufficient data points for interpretation.


Silver in Lake Waters
Approx %'ile
Ag (ppb) ICP-MS
>98
>0.193
95-98
0.110-0.193
90-95
0.069-0.110
50-90
0.040-0.069
<50
<0.040
FRATER
418678 m E
SOMME
JACK
Gogama
NOBLE
TOGO
463443 m E
5282453 m N
144
POTIER
NEVILLE
ST LOUIS
GROVER
BRUNSWICK
YEO
CHESTER
BENNEWEIS
CHAMPAGNE
LONDONDERRY
5258060 m N
SMUTS
INVERGARRY
VROOMAN
WESTBROOK
GARVEY
463443 m E
383563 m E
Biscotasi Lake
5251895 m N
FAUST
HALL
JOFFRE
HOLLINGER
BISCOTASI
ARDEN
EDINBURGH
INVERNESS
HENNESSY
Biscotasing
HUBBARD
ABNEY
ELIZABETH
MARGARET
LILLIE
CHALET
PAUDASH
BREBEUF
BLEWETT
IRIS
CORTEZ
KELSO
MCPHAIL
BAZETT
CAVANA
MARQUETTE
BAYNES
SHELLEY
Ramsey Lake
FULTON
GLADWIN
IVY
SPECHT
BREADNER
BATTERSBY
DUBLIN
ONAPING
Onaping Lake
5206594 m N
COMOX
ETHEL
URBAN
JASPER
ALTON
LAFLECHE
ATHLONE
MULDREW
FAIRBAIRN
383563 m E
436102 m E
0
10
20
Kilometres
LEGEND
Massive granodiorite to granite
Diorite monzonite granodiorite suite
Gneissic tonalite suite
Foliated tonalite suite
Felsic to intermediate metavolcanic rocks
Mafic to intermediate metavolcanic rocks
Mafic and ultramafic metavolcanic rocks
Mafic to ultramafic rocks
Migmatized supracrustal rocks
Coarse clastic metasedimentary rocks
Faults
Dikes
Lakes
N


Silver in Lake Sediments
Approx %'ile
Ag (ppm) ICP-MS
>98 ● >0.260
95-98 ● 0.220-0.260
90-95 ● 0.186-0.220
75-90 ● 0.140-0.186
50-75 ● 0.110-0.140
<50 • <0.110
FRATER
418678 m E
SOMME
JACK
Gogama
NOBLE
TOGO
463443 m E
5282453 m N
POTIER
NEWTON
T. LOUIS
144
WEIS
CHAMPAGNE
ONDONDER
5258060 m N
463443 m E
SMUTS
INVERGARRY
VROOMAN
WESTBROOK
GARVEY
383563 m E
5251895 m N
FAUST
JOFFRE
HOLLINGER
BISCOTASI
DEN
Biscotasi Lake
Biscotasing
EDINBURGH
INVERNESS
HENNESSY
HUBBARD
ABNEY
ELIZABETH
LILLIE
PAUDASH
BREBEUF
BLEWETT
IRIS
KELSO
McPHAIL
CAVANA
MARQUETTE
BAYNES
SHELLEY
FULTON
BREADNER
BATTERSBY
DUBLIN
ONAPING
5206594 m N
Onaping Lake
JASPER
ALTON
LAFLECHE
ATHLONE
MULDREW
FAIRBAIRN
383563 m E
436102 m E
0
10
20
Kilometres
LEGEND
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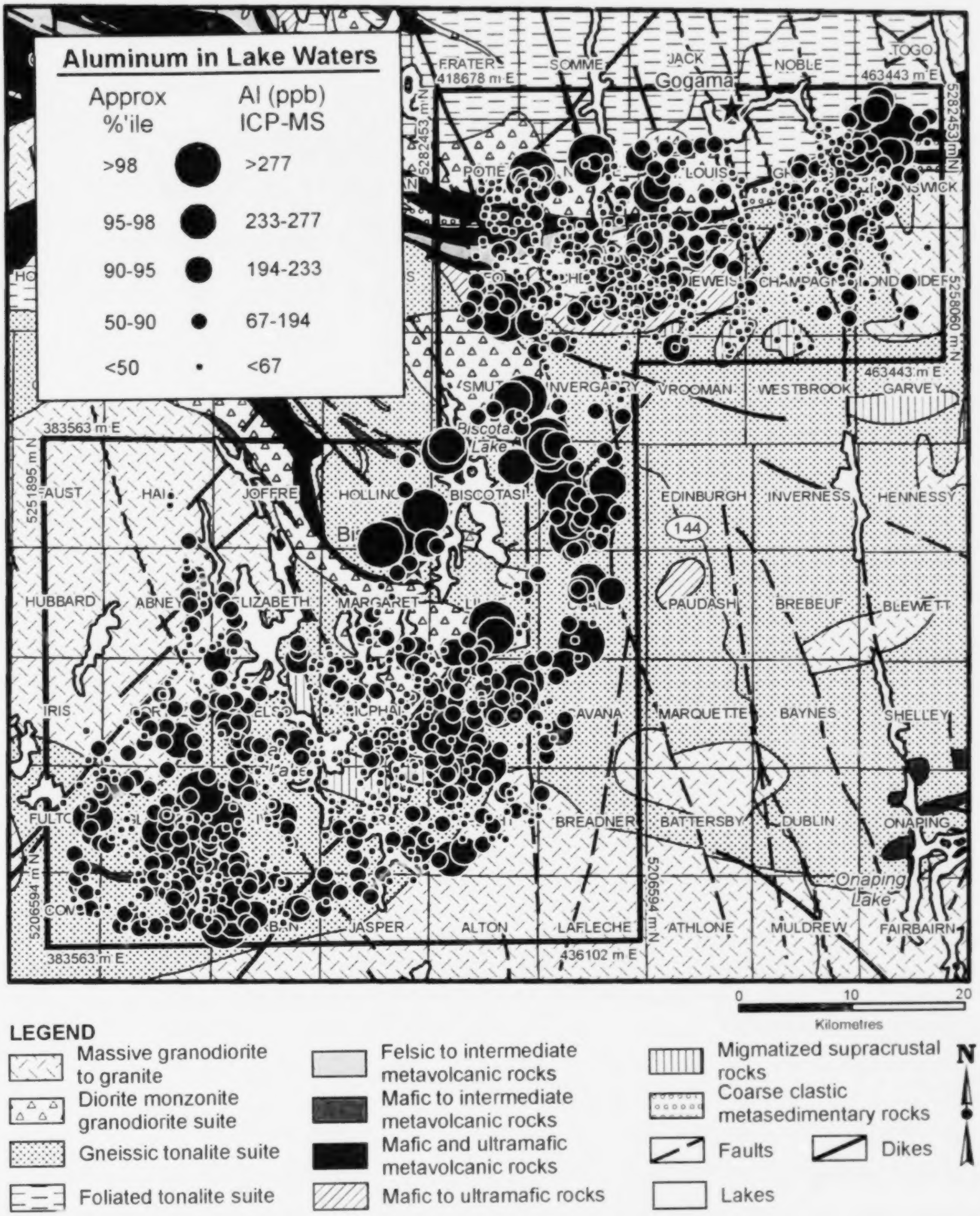
Mafic to ultramafic rocks
Migmatized supracrustal rocks
Coarse clastic metasedimentary rocks
Faults
Dikes
Lakes
N


Aluminum in Lake Waters
Approx %'ile
Al (ppb) ICP-MS
>98 >277
95-98 233-277
90-95 194-233
50-90 67-194
<50 <67
FRATER
418678 m E
SOMME
JACK
Gogama
NOBLE
TOGO
463443 m E
5282453 m N
POTIE
LOUIS
NSWICK
EWEIS
CHAMPAGN
ONDIDER
5258060 m N
463443 m E
SMUT
INVERGARRY
VROOMAN
WESTBROOK
GARVEY
Biscota Lake
383563 m E
5251895 m N
AUST
HAI
JOFFRE
HOLLINC
BISCOTASI
EDINBURGH
INVERNESS
HENNESSY
144
HUBBARD
ABNEY
ELIZABETH
MARGARET
PAUDASH
BREBEUF
BLEWETT
IRIS
CAVANA
MARQUETTE
BAYNES
SHELLEY
FULTC
BREADNER
BATTERSBY
DUBLIN
ONAPING
5206594 m N
Onaping Lake
COM
JASPER
ALTON
LAFLECHE
ATHLONE
MULDREW
FAIRBAIRN
383563 m E
436102 m E
0
10
20
Kilometres
LEGEND
Massive granodiorite to granite
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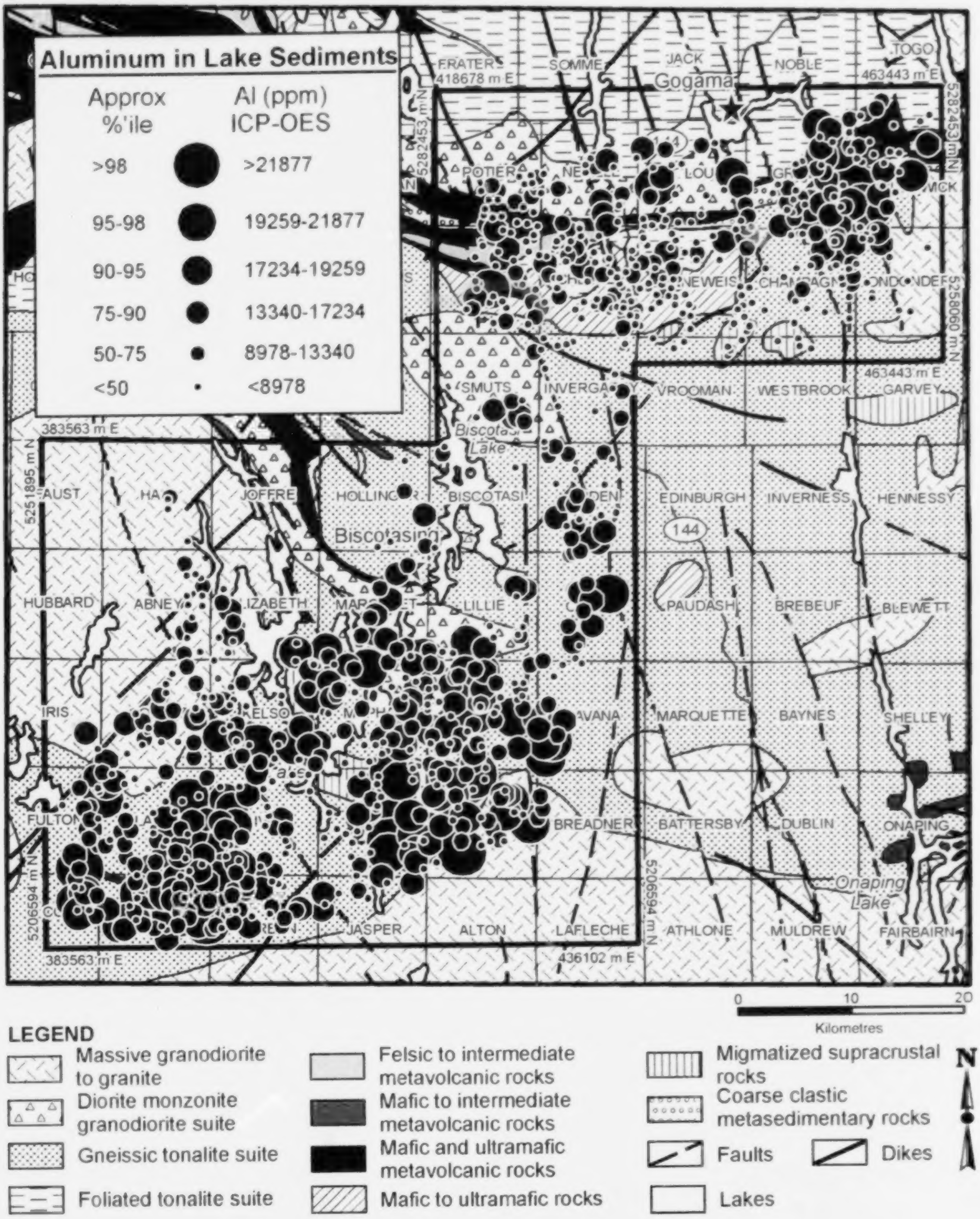
Mafic to ultramafic rocks
Migmatized supracrustal rocks
Coarse clastic metasedimentary rocks
Faults
Dikes
Lakes
N


Aluminum in Lake Sediments
Approx %'ile
Al (ppm) ICP-OES
>98
>21877
95-98
19259-21877
90-95
17234-19259
75-90
13340-17234
50-75
8978-13340
<50
<8978
FRATER
418678 m E
SOMME
JACK
Gogama
NOBLE
TOGO
463443 m E
5282453 m N
POTIER
LOU
NEWEIS
CHAMPAGNE
ONDONDER
5258060 m N
463443 m E
SMUTS
INVERGARRY
VROOMAN
WESTBROOK
GARVEY
383563 m E
Biscotasi Lake
5251895 m N
FAUST
JOFFRE
HOLLINGER
BISCOTASI
EDINBURGH
INVERNESS
HENNESSY
Biscotasing
144
HUBBARD
ABNEY
ELIZABETH
LILLIE
PAUDASH
BREBEUF
BLEWETT
IRIS
KELSO
MARQUETTE
BAYNES
SHELLEY
FULTON
BREADNER
BATTERSBY
DUBLIN
ONAPING
5206594 m N
JASPER
ALTON
LAFLECHE
ATHLONE
MULDREW
FAIRBAIRN
Onaping Lake
383563 m E
436102 m E
0
10
20
Kilometres
LEGEND
Massive granodiorite to granite
Diorite monzonite granodiorite suite
Gneissic tonalite suite
Foliated tonalite suite
Felsic to intermediate metavolcanic rocks
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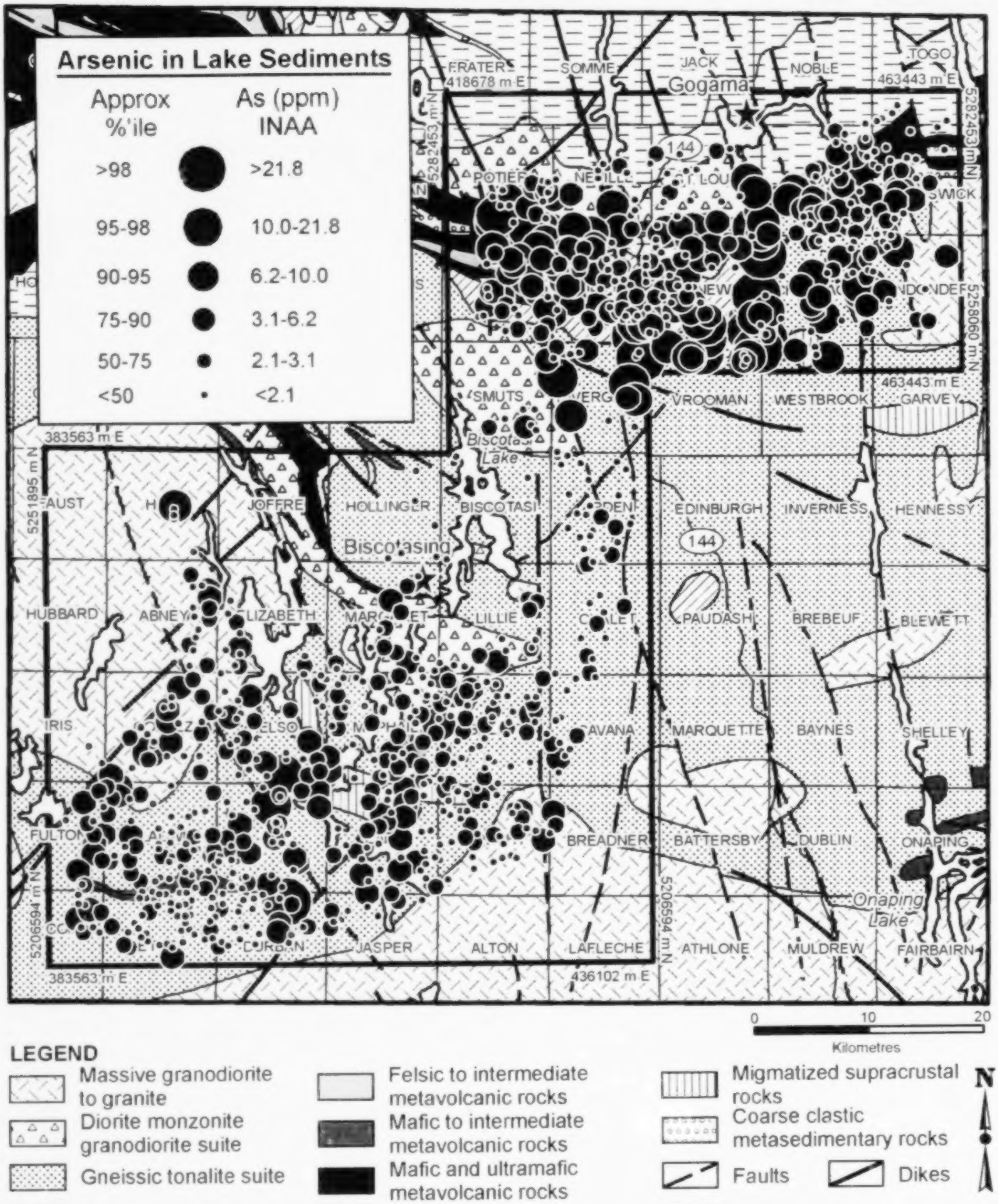
Mafic to ultramafic rocks
Migmatized supracrustal rocks
Coarse clastic metasedimentary rocks
Faults
Dikes
Lakes
N


Arsenic in Lake Sediments
Approx %'ile
As (ppm) INAA
>98 >21.8
95-98 10.0-21.8
90-95 6.2-10.0
75-90 3.1-6.2
50-75 2.1-3.1
<50 <2.1
FRATER
418678 m E
SOMME
JACK
NOBLE
TOGO
463443 m E
Gogama
144
POTIER
NEVILLE
ST. LOUIS
SWICK
5282453 m N
NEW
ONDONDERY
5258060 m N
463443 m E
SMUTS
VROOMAN
WESTBROOK
GARVEY
Biscotasi Lake
383563 m E
5251895 m N
FAUST
JOFFRE
HOLLINGER
BISCOTASI
EDINBURGH
INVERNESS
HENNESSY
Biscotasing
144
HUBBARD
ABNEY
ELIZABETH
MARGARET
LILLIE
CHALET
PAUDASH
BREBEUF
BLEWETT
IRIS
AVANA
MARQUETTE
BAYNES
SHELLEY
FULTON
BREADNER
BATTERSBY
DUBLIN
ONAPING
5206594 m N
Onaping Lake
JASPER
ALTON
LAFLECHE
ATHLONE
MULDREW
FAIRBAIRN
DURBAN
383563 m E
436102 m E
0
10
20
Kilometres
LEGEND
Massive granodiorite to granite
Diorite monzonite granodiorite suite
Gneissic tonalite suite
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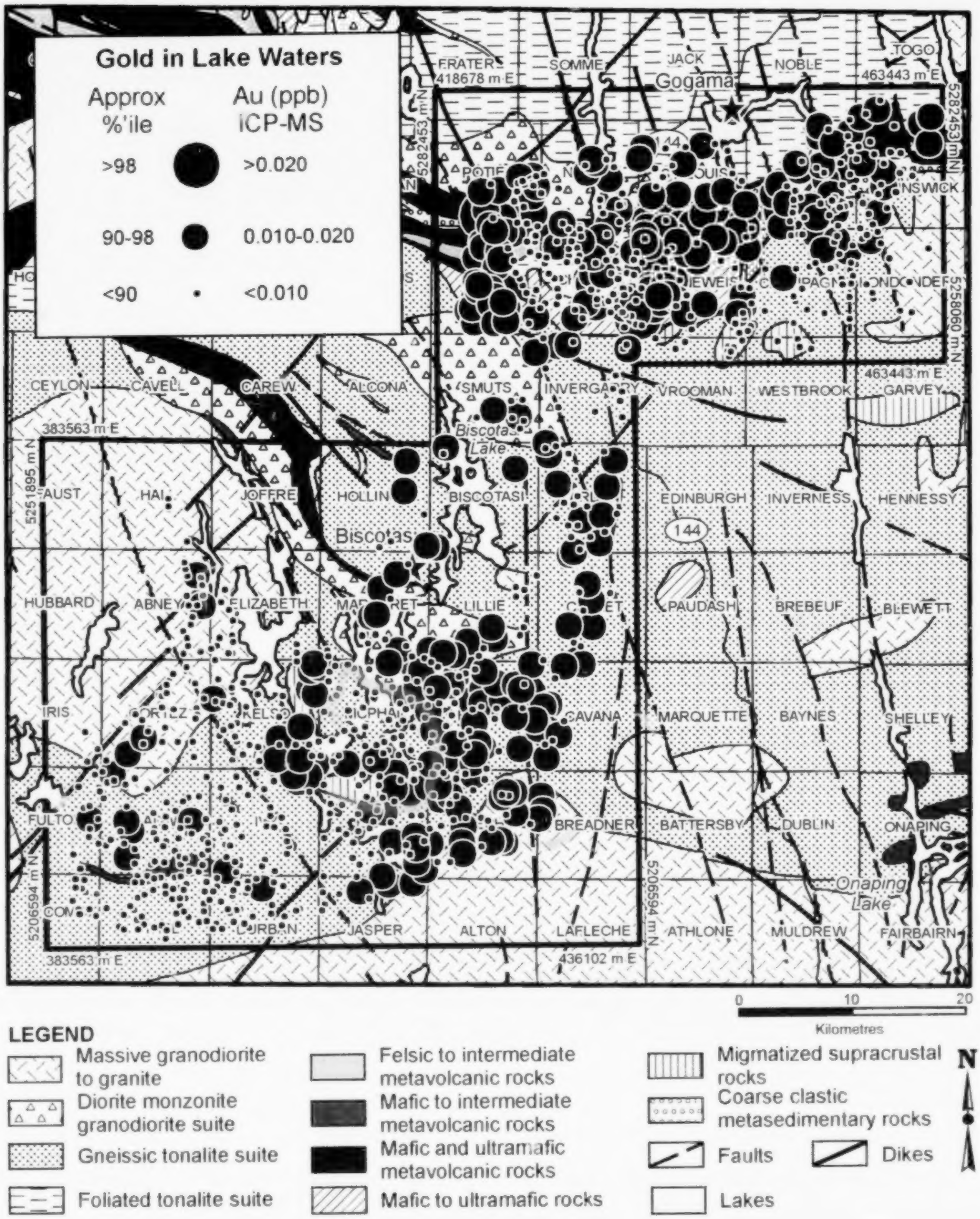
Mafic to intermediate metavolcanic rocks
Mafic and ultramafic metavolcanic rocks
Mafic to ultramafic rocks
Migmatized supracrustal rocks
Coarse clastic metasedimentary rocks
Faults
Dikes
Lakes
N



Gold in Lake Waters
Approx %'ile
Au (ppb) ICP-MS
>98
>0.020
90-98
0.010-0.020
<90
<0.010
FRATER
SOMME
JACK
NOBLE
TOGO
Gogama
418678 m E
463443 m E
5282453 m N
5258060 m N
463443 m E
CEYLON
CAVELL
CAREW
ALCONA
SMUTS
INVERGARRY
VROOMAN
WESTBROOK
GARVEY
383563 m E
5251895 m N
Biscotasi Lake
FAUST
HAI
JOFFRE
HOLLIN
BISCOTASI
EDINBURGH
INVERNESS
HENNESSY
144
Biscotasing
HUBBARD
ABNEY
ELIZABETH
LILLIE
PAUDASH
BREBEUF
BLEWETT
IRIS
CORTEZ
CAVANA
MARQUETTE
BAYNES
SHELLEY
FULTON
BREADNER
BATTERSBY
DUBLIN
ONAPING
Onaping Lake
5206594 m N
ALTON
LAFLECHE
ATHLONE
MULDREW
FAIRBAIRN
JASPER
383563 m E
436102 m E
0
10
20
Kilometres
LEGEND
Massive granodiorite to granite
Diorite monzonite granodiorite suite
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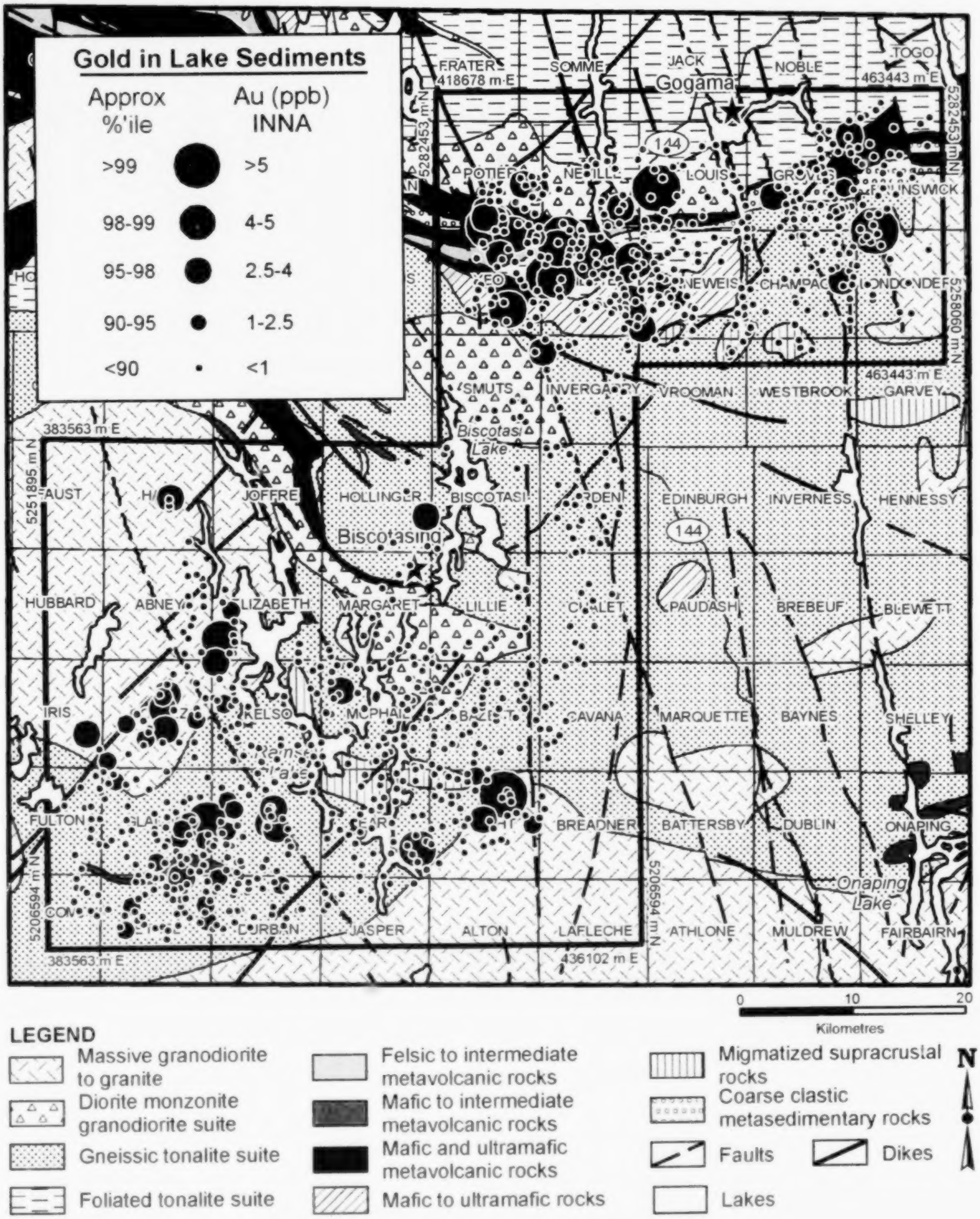
Migmatized supracrustal rocks
Coarse clastic metasedimentary rocks
Faults
Dikes
Lakes
N


Gold in Lake Sediments
Approx %'ile
Au (ppb) INNA
>99 ● >5
98-99 ● 4-5
95-98 ● 2.5-4
90-95 ● 1-2.5
<90 • <1
FRATER
418678 m E
SOMME
JACK
Gogama
NOBLE
TOGO
463443 m E
5282453 m N
144
POTIER
NEVILLE
LOUIS
GROVE
BRUNSWICK
NEWEIS
CHAMPAGNE
LONDONDERRY
5258060 m N
463443 m E
SMUTS
INVERGARRY
VROOMAN
WESTBROOK
GARVEY
383563 m E
Biscotasi Lake
5251895 m N
FAUST
JOFFRE
HOLLINGER
BISCOTASI
EDINBURGH
INVERNESS
HENNESSY
Biscotasing
HUBBARD
ABNEY
ELIZABETH
MARGARET
LILLIE
CHALET
PAUDASH
BREBEUF
BLEWETT
IRIS
KELSO
McPHAIL
CAVANA
MARQUETTE
BAYNES
SHELLEY
FULTON
BREADNER
BATTERSBY
DUBLIN
ONAPING
5206594 m N
Onaping Lake
DURBAN
JASPER
ALTON
LAFLECHE
ATHLONE
MULDREW
FAIRBAIRN
383563 m E
436102 m E
0
10
20
Kilometres
LEGEND
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Mafic to intermediate metavolcanic rocks
Mafic and ultramafic metavolcanic rocks
Mafic to ultramafic rocks
Migmatized supracrustal rocks
Coarse clastic metasedimentary rocks
Faults
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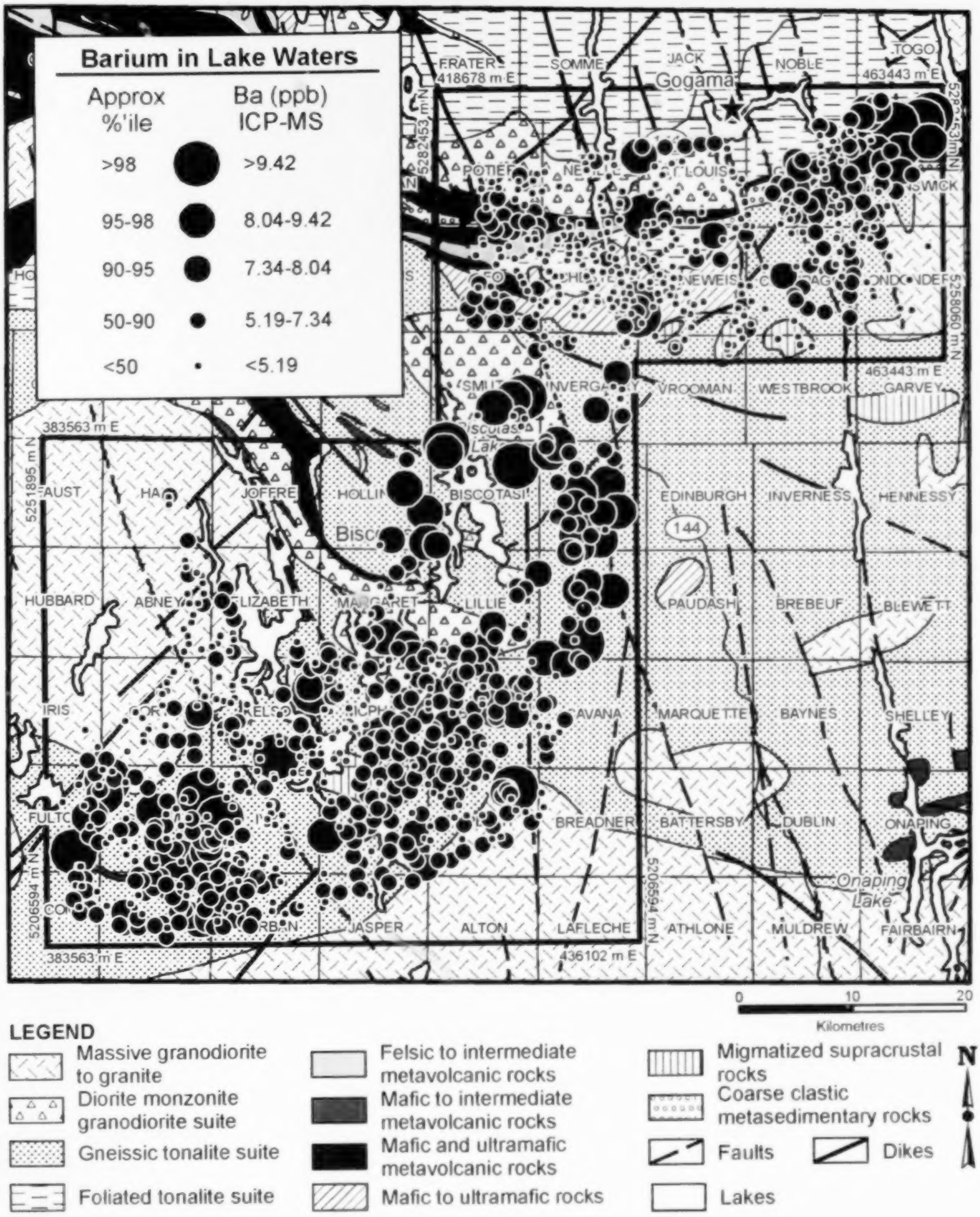
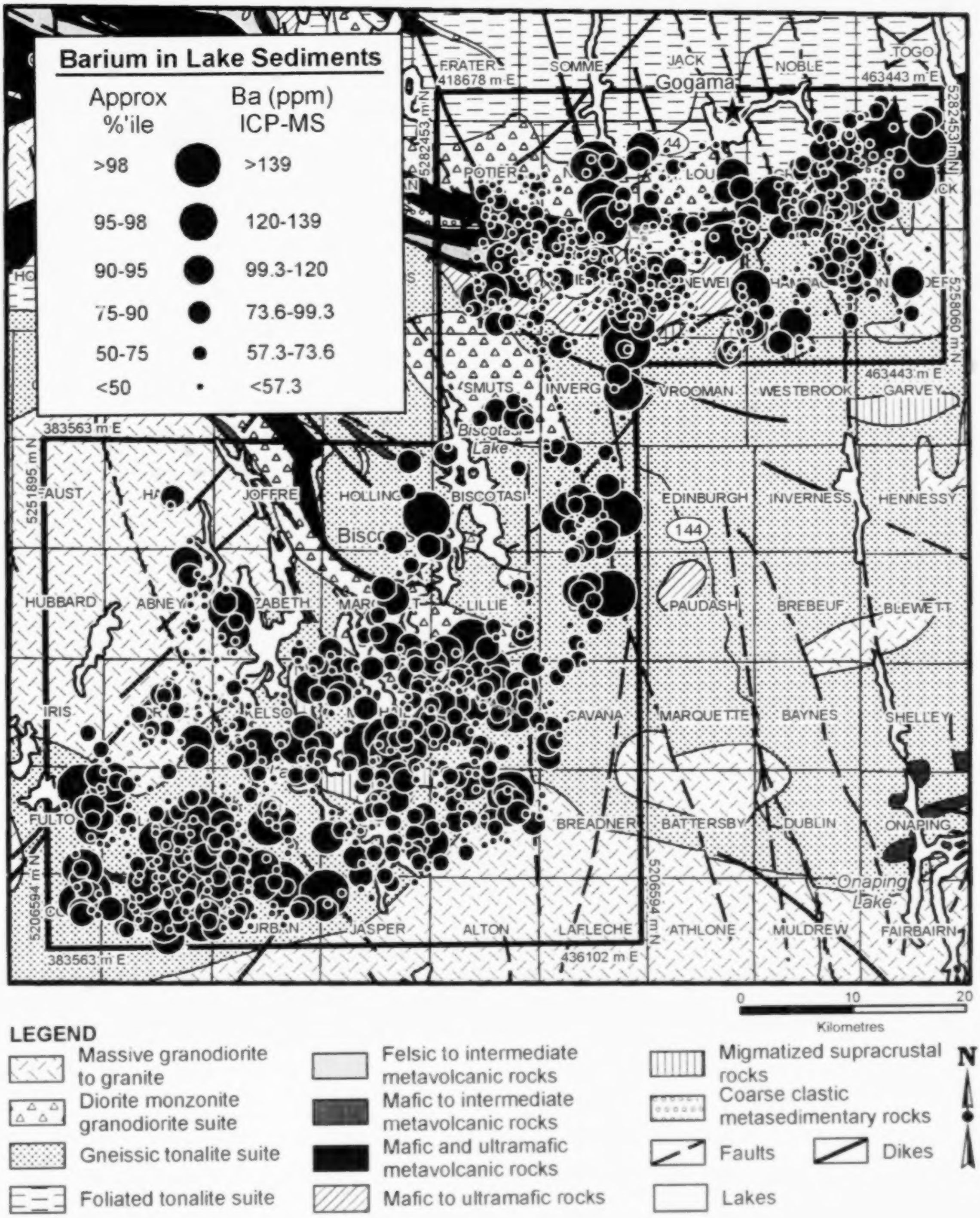
Lakes
N


Barium in Lake Waters
Approx %'ile
Ba (ppb) ICP-MS
>98 >9.42
95-98 8.04-9.42
90-95 7.34-8.04
50-90 5.19-7.34
<50 <5.19
FRATER
418678 m E
SOMME
JACK
Gogama
NOBLE
TOGO
463443 m E
5282453 m N
POTIER
ST. LOUIS
NEWEIS
5258060 m N
463443 m E
VROOMAN
WESTBROOK
GARVEY
383563 m E
5251895 m N
FAUST
JOFFRE
HOLLIN
BISCOTASI
Biscotasi Lake
EDINBURGH
INVERNESS
HENNESSY
144
HUBBARD
ABNEY
ELIZABETH
MARGARET
LILLIE
PAUDASH
BREBEUF
BLEWETT
IRIS
CAVANA
MARQUETTE
BAYNES
SHELLEY
BREADNER
BATTERSBY
DUBLIN
ONAPING
5206594 m N
Onaping Lake
JASPER
ALTON
LAFLECHE
ATHLONE
MULDREW
FAIRBAIRN
383563 m E
436102 m E
0
10
20
Kilometres
LEGEND
Massive granodiorite to granite
Diorite monzonite granodiorite suite
Gneissic tonalite suite
Foliated tonalite suite
Felsic to intermediate metavolcanic rocks
Mafic to intermediate metavolcanic rocks
Mafic and ultramafic metavolcanic rocks
Mafic to ultramafic rocks
Migmatized supracrustal rocks
Coarse clastic metasedimentary rocks
Faults
Dikes
Lakes
N


Barium in Lake Sediments
Approx %'ile
Ba (ppm) ICP-MS
>98 ● >139
95-98 ● 120-139
90-95 ● 99.3-120
75-90 ● 73.6-99.3
50-75 ● 57.3-73.6
<50 • <57.3
FRATER
418678 m E
SOMME
JACK
Gogama
NOBLE
TOGO
463443 m E
5282453 m N
POTIER
LOU
NEWEL
5258060 m N
463443 m E
SMUTS
INVERG
VROOMAN
WESTBROOK
GARVEY
Biscotasi Lake
383563 m E
5251895 m N
AUST
JOFFRE
HOLLING
BISCOTASI
EDINBURGH
INVERNESS
HENNESSY
144
HUBBARD
ABNEY
ZABETH
LILLIE
PAUDASH
BREBEUF
BLEWETT
IRIS
KELSO
CAVANA
MARQUETTE
BAYNES
SHELLEY
FULTO
BREADNER
BATTERSBY
DUBLIN
ONAPING
Onaping Lake
5206594 m N
URBAN
JASPER
ALTON
LAFLECHE
ATHLONE
MULDREW
FAIRBAIRN
383563 m E
436102 m E
0
10
20
Kilometres
LEGEND
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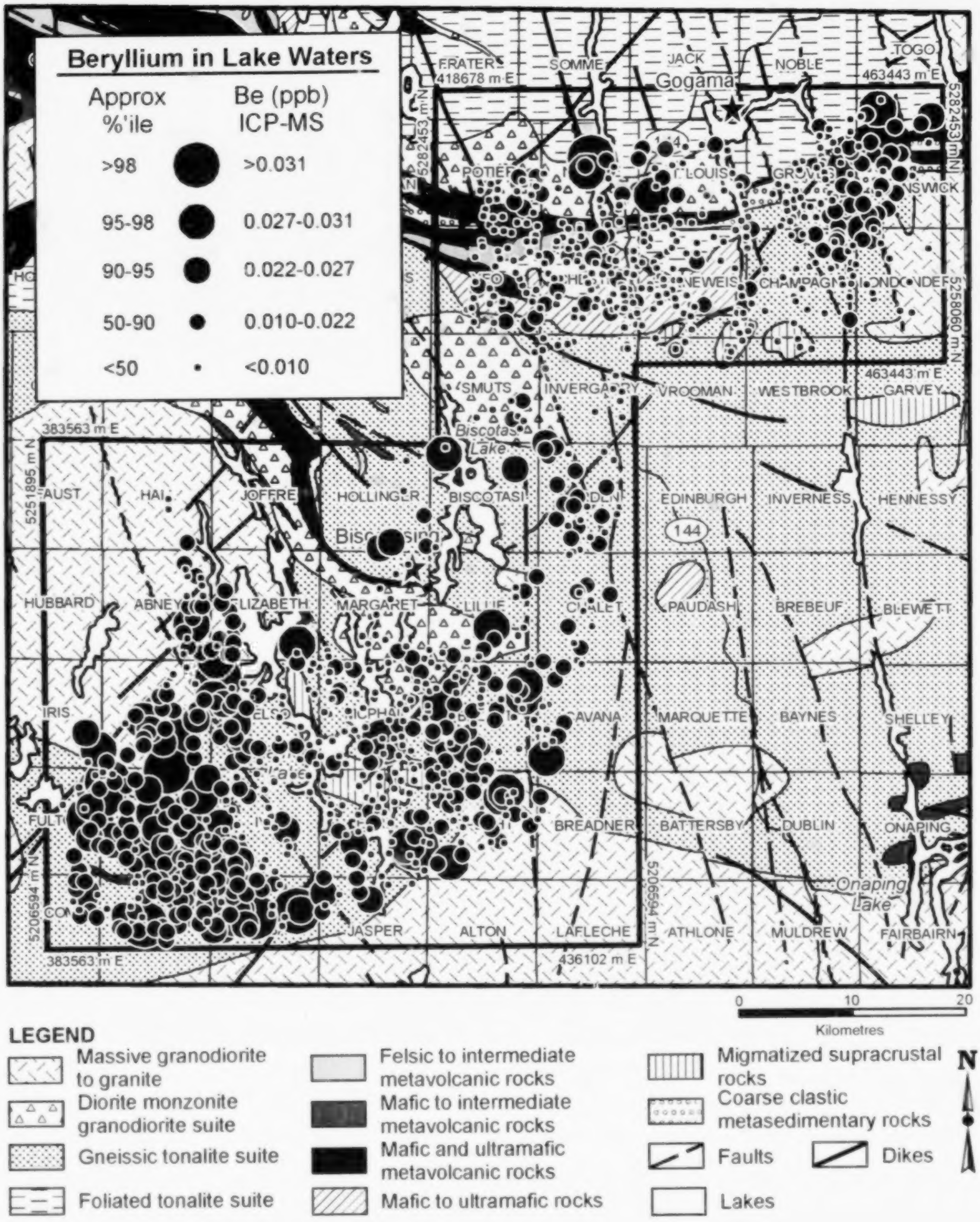
Faults
Dikes
Lakes
N



Beryllium in Lake Waters
Approx %'ile
Be (ppb) ICP-MS
>98
>0.031
95-98
0.027-0.031
90-95
0.022-0.027
50-90
0.010-0.022
<50
<0.010
FRATER
418678 m E
SOMME
JACK
Gogama
NOBLE
TOGO
463443 m E
5282453 m N
POTIER
ST. LOUIS
GROVES
BRUNSWICK
NEWEIS
CHAMPAGNE
LONDONDERRY
5258060 m N
463443 m E
SMUTS
INVERGARRY
VROOMAN
WESTBROOK
GARVEY
Biscotasi Lake
383563 m E
5251895 m N
FAUST
HALIBURTON
JOFFRE
HOLLINGER
BISCOTASI
EDINBURGH
INVERNESS
HENNESSY
144
Biscotasing
HUBBARD
ABNEY
ELIZABETH
MARGARET
LILLIE
CHALET
PAUDASH
BREBEUF
BLEWETT
IRIS
AVANA
MARQUETTE
BAYNES
SHELLEY
BREADNER
BATTERSBY
DUBLIN
ONAPING
Onaping Lake
5206594 m N
JASPER
ALTON
LAFLECHE
ATHLONE
MULDREW
FAIRBAIRN
383563 m E
436102 m E
0
10
20
Kilometres
LEGEND
Massive granodiorite to granite
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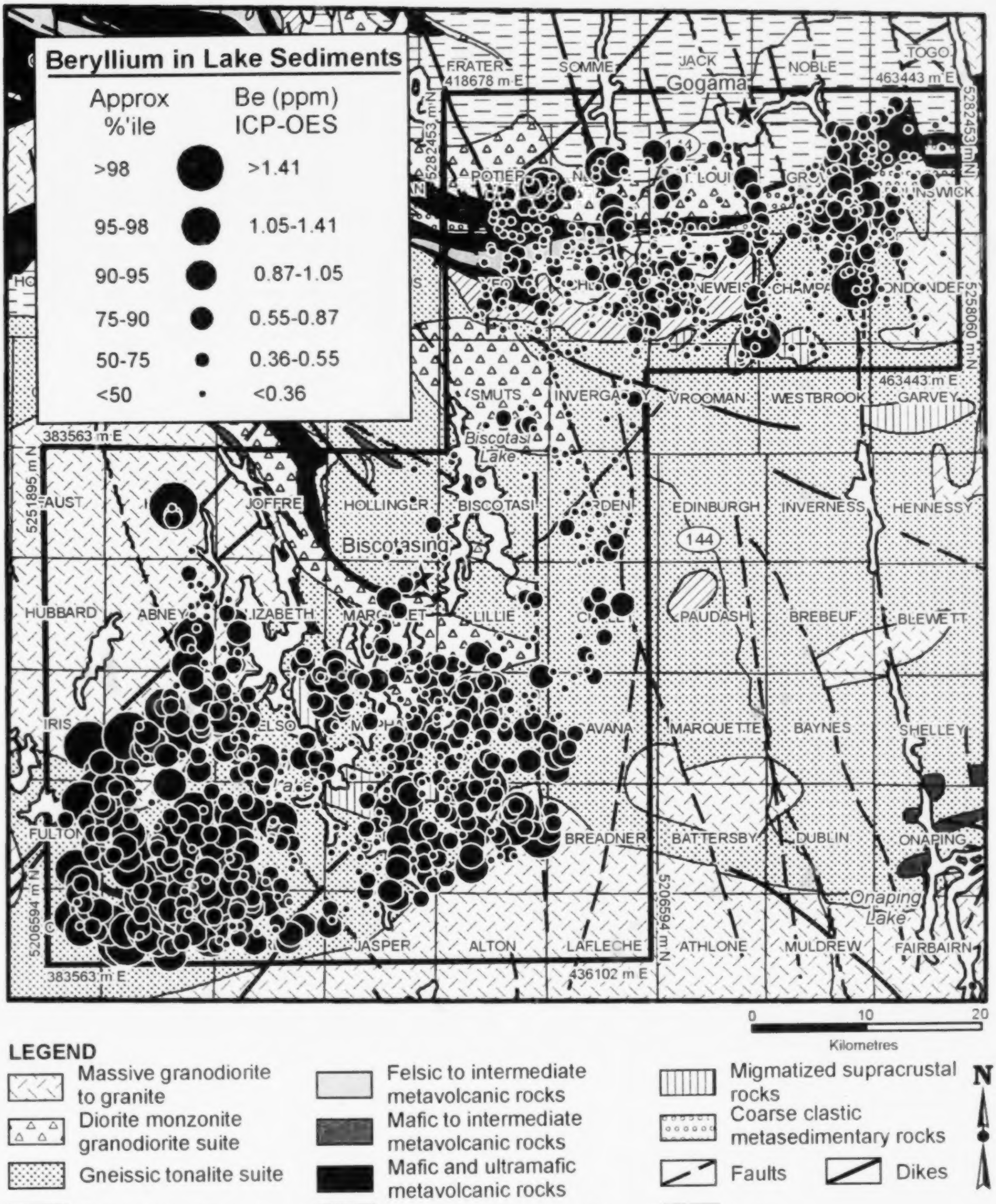
Mafic to ultramafic rocks
Migmatized supracrustal rocks
Coarse clastic metasedimentary rocks
Faults
Dikes
Lakes
N


Beryllium in Lake Sediments
Approx %'ile
Be (ppm) ICP-OES
>98
>1.41
95-98
1.05-1.41
90-95
0.87-1.05
75-90
0.55-0.87
50-75
0.36-0.55
<50
<0.36
FRATER
418678 m E
SOMME
JACK
Gogama
NOBLE
TOGO
463443 m E
5282453 m N
POTIER
T. LOUI
GRO
NSWICK
NEWEIS
CHAMPA
ONDONDEF
5258060 m N
463443 m E
SMUTS
INVERGA
VROOMAN
WESTBROOK
GARVEY
383563 m E
Biscotasi Lake
5251895 m N
FAUST
JOFFRE
HOLLINGER
BISCOTASI
RDEN
EDINBURGH
INVERNESS
HENNESSY
144
Biscotasing
HUBBARD
ABNEY
IZABETH
MARG ET
LILLIE
PAUDASH
BREBEUF
BLEWETT
IRIS
ELSO
AVANA
MARQUETTE
BAYNES
SHELLEY
FULTON
BREADNER
BATTERSBY
DUBLIN
ONAPING
5206594 m N
JASPER
ALTON
LAFLECHE
436102 m E
ATHLONE
MULDREW
Onaping Lake
FAIRBAIRN
383563 m E
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10
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Kilometres
LEGEND
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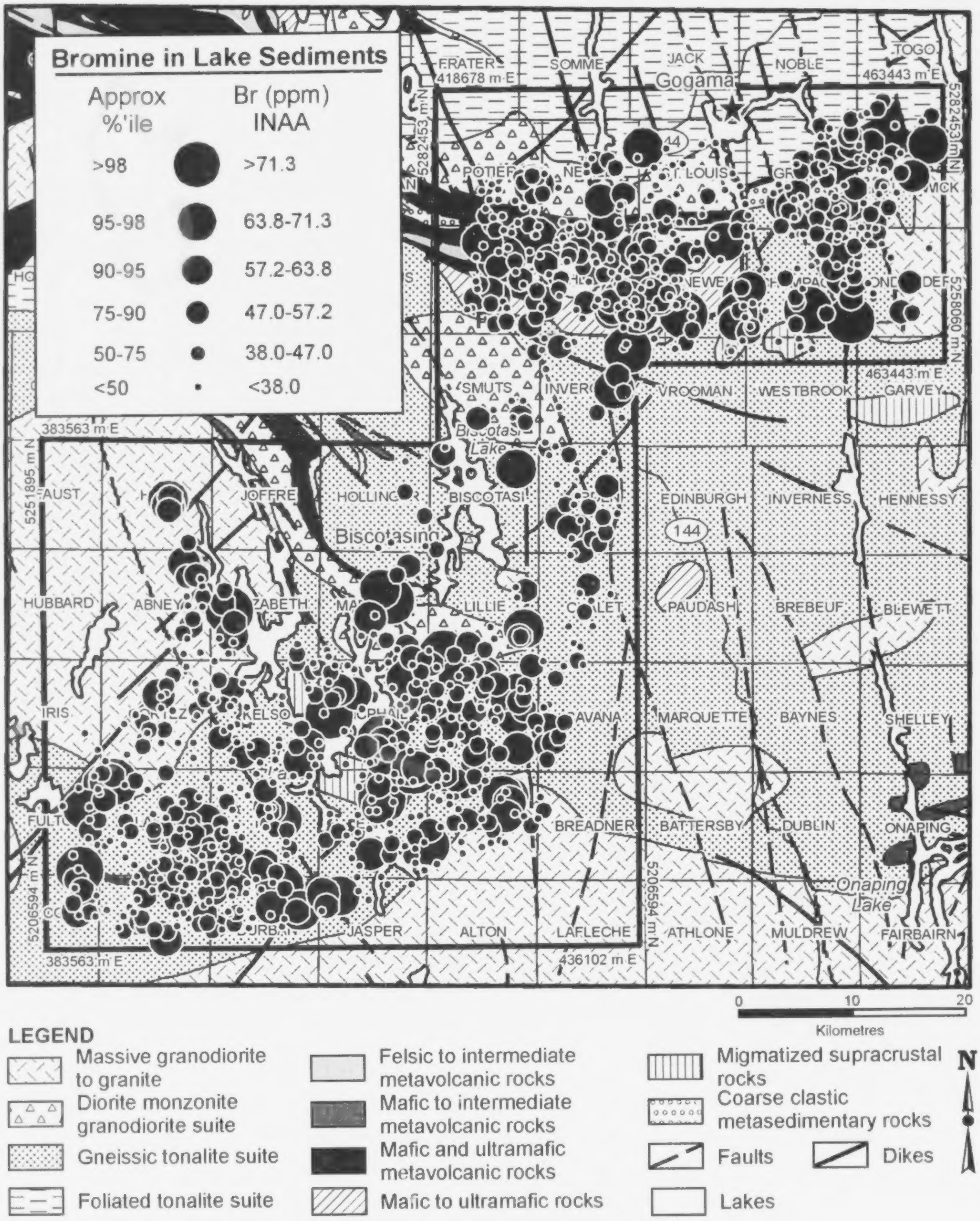
Mafic and ultramafic metavolcanic rocks
Mafic to ultramafic rocks
Migmatized supracrustal rocks
Coarse clastic metasedimentary rocks
Faults
Dikes
Lakes
N


Bromine in Lake Sediments
Approx %'ile
Br (ppm) INAA
>98 >71.3
95-98 63.8-71.3
90-95 57.2-63.8
75-90 47.0-57.2
50-75 38.0-47.0
<50 <38.0
FRATER
418678 m E
SOMME
JACK
Gogama
NOBLE
TOGO
463443 m E
5282453 m N
5282453 m N
POTIER
ST. LOUIS
144
5258060 m N
463443 m E
SMUTS
INVER
VROOMAN
WESTBROOK
GARVEY
Biscotasi Lake
383563 m E
5251895 m N
FAUST
JOFFRE
HOLLINGER
BISCOTASI
EDINBURGH
INVERNESS
HENNESSY
Biscotasing
144
HUBBARD
ABNEY
ZABETH
LILLIE
CHALET
PAUDASH
BREBEUF
BLEWETT
IRIS
KELSO
AVANA
MARQUETTE
BAYNES
SHELLEY
FULT
BREADNER
BATTERSBY
DUBLIN
ONAPING
5206594 m N
5206594 m N
Onaping Lake
JASPER
ALTON
LAFLECHE
ATHLONE
MULDREW
FAIRBAIRN
383563 m E
436102 m E
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20
Kilometres
LEGEND
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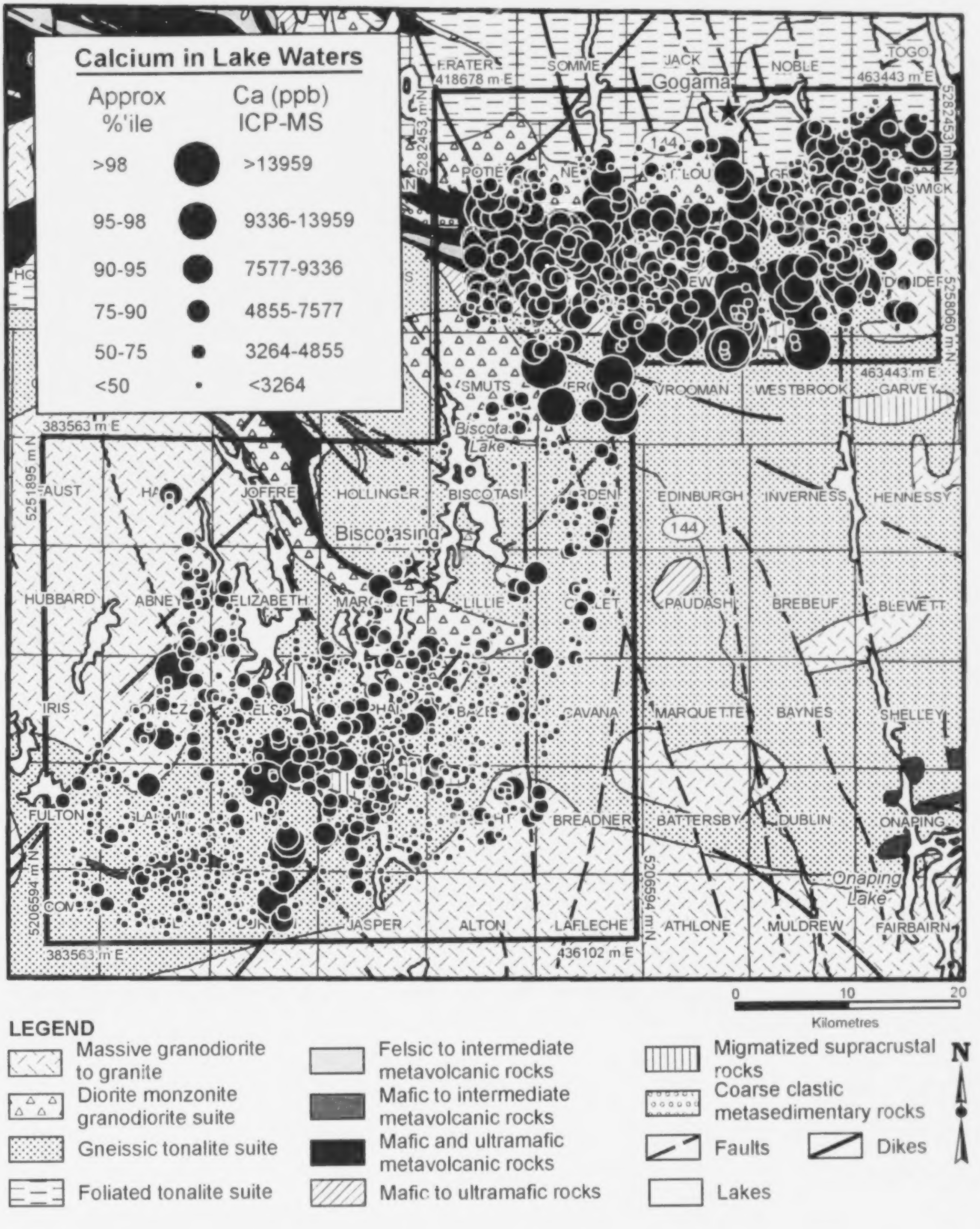
Faults
Dikes
Lakes
N


Calcium in Lake Waters
Approx %'ile
Ca (ppb) ICP-MS
>98 ● >13959
95-98 ● 9336-13959
90-95 ● 7577-9336
75-90 ● 4855-7577
50-75 • 3264-4855
<50 · <3264
FRATER
418678 m E
SOMME
JACK
Gogama
NOBLE
TOGO
463443 m E
5282453 m N
POTIER
144
SMUTS
VROOMAN
WESTBROOK
GARVEY
463443 m E
5258060 m N
383563 m E
5251895 m N
Biscotasi Lake
FAUST
JOFFRE
HOLLINGER
BISCOTASI
EDINBURGH
INVERNESS
HENNESSY
Biscotasing
HUBBARD
ABNEY
ELIZABETH
LILLIE
PAUDASH
BREBEUF
BLEWETT
IRIS
CAVANA
MARQUETTE
BAYNES
SHELLEY
FULTON
BREADNER
BATTERSBY
DUBLIN
ONAPING
5206594 m N
Onaping Lake
JASPER
ALTON
LAFLECHE
ATHLONE
MULDREW
FAIRBAIRN
383563 m E
436102 m E
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Kilometres
LEGEND
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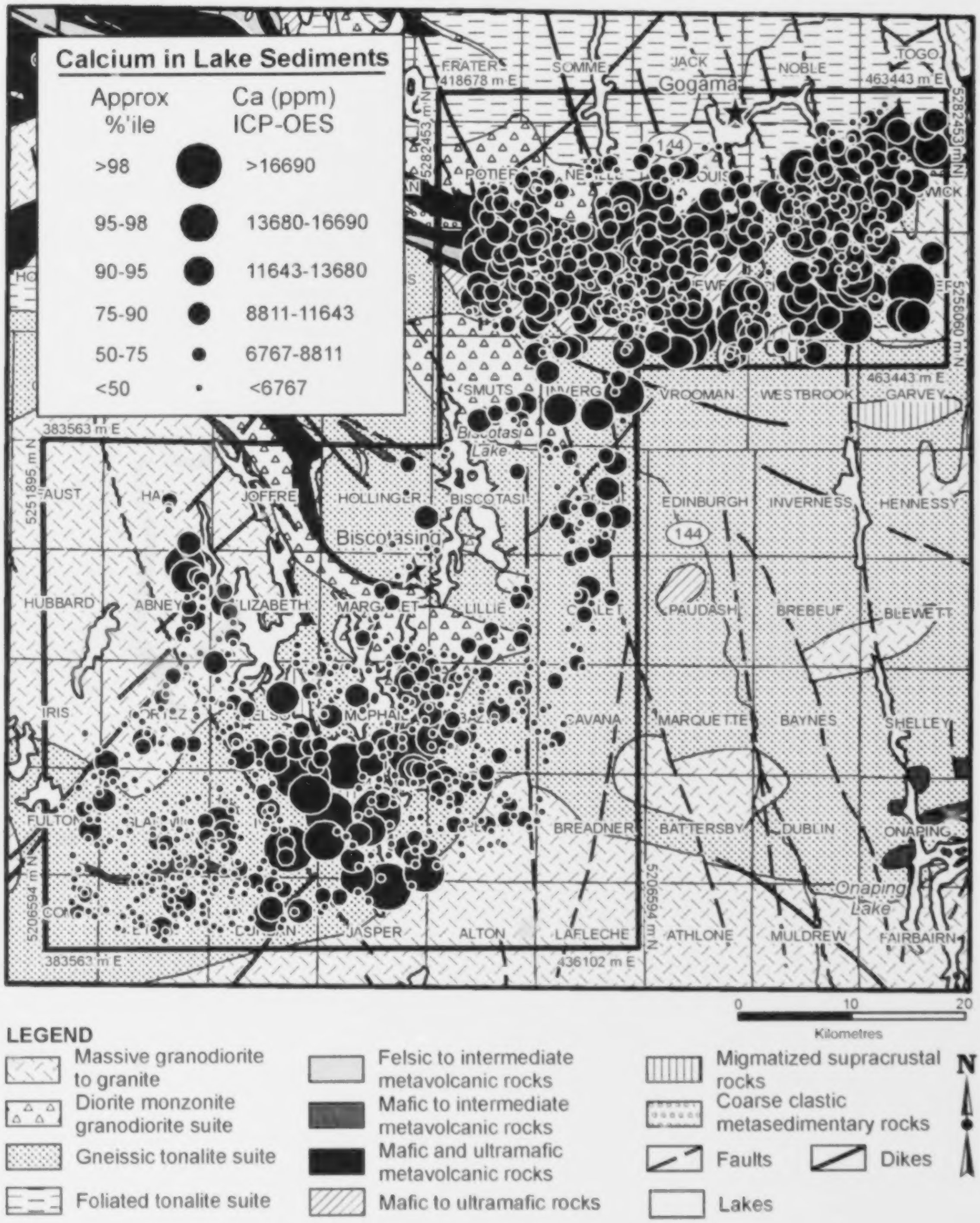
Dikes
Lakes
N


Calcium in Lake Sediments
Approx %'ile
Ca (ppm) ICP-OES
>98 >16690
95-98 13680-16690
90-95 11643-13680
75-90 8811-11643
50-75 6767-8811
<50 <6767
FRATER
418678 m E
SOMME
JACK
NOBLE
TOGO
463443 m E
Gogama
144
POTIER
5282453 m N
5256060 m N
463443 m E
SMUTS
VROOMAN
WESTBROOK
GARVEY
383563 m E
5251895 m N
FAUST
JOFFRE
HOLLINGER
BISCOTASI
Biscotasi Lake
Biscotasing
EDINBURGH
INVERNESS
HENNESSY
HUBBARD
ABNEY
ELIZABETH
MARGARET
LILLIE
PAUDASH
BREBEUF
BLEWETT
IRIS
CORTEZ
MCPHAIL
CAVANA
MARQUETTE
BAYNES
SHELLEY
FULTON
BREADNER
BATTERSBY
DUBLIN
ONAPING
5206594 m N
Onaping Lake
JASPER
ALTON
LAFLECHE
ATHLONE
MULDREW
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383563 m E
436102 m E
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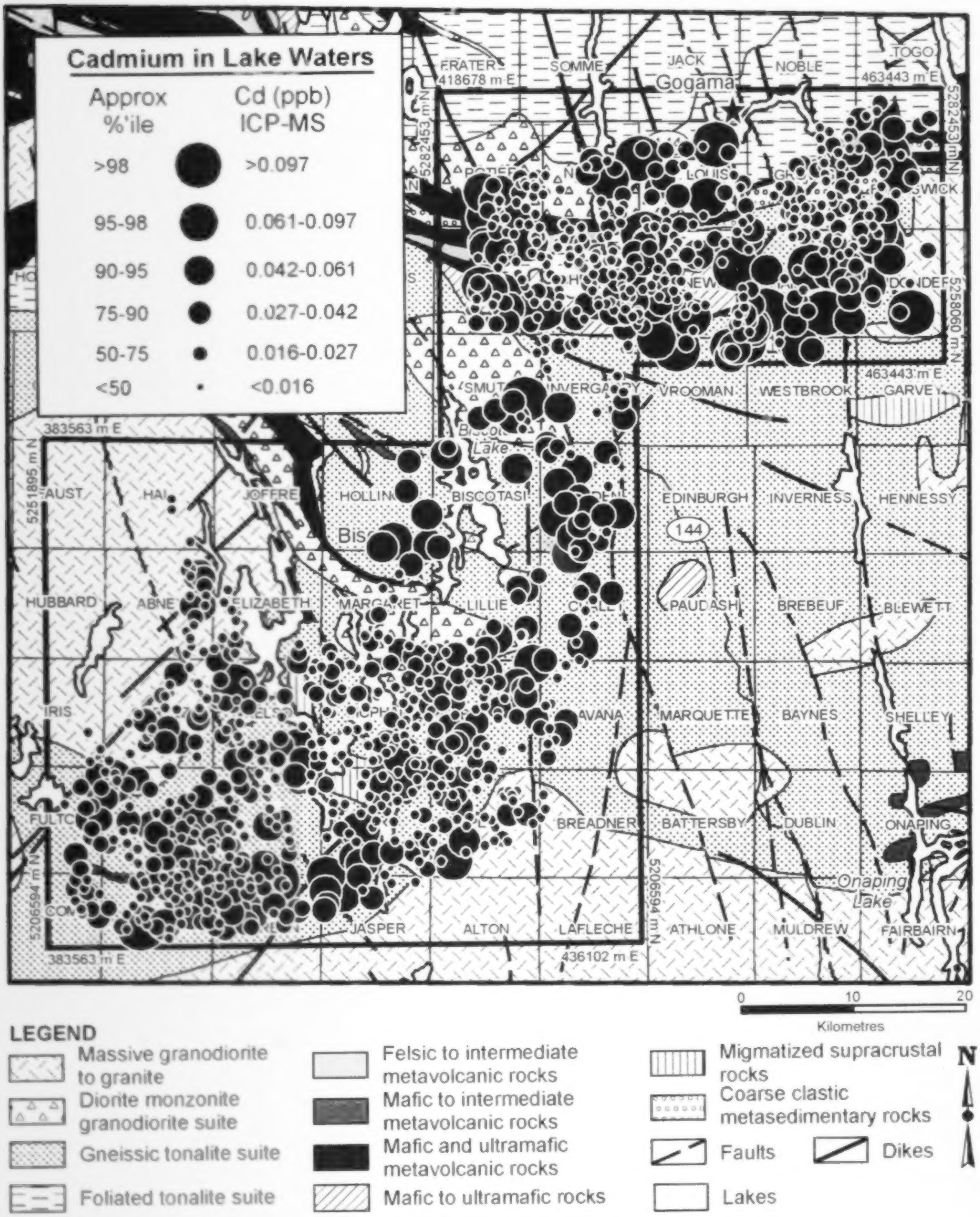
Cadmium in Lake Waters
Approx %'ile
Cd (ppb) ICP-MS
>98 ● >0.097
95-98 ● 0.061-0.097
90-95 ● 0.042-0.061
75-90 ● 0.027-0.042
50-75 • 0.016-0.027
<50 · <0.016
FRATER
418678 m E
SOMME
JACK
Gogama
NOBLE
TOGO
463443 m E
5282453 m N
5282453 m N
LOUIS
SMUT
INVERGARRY
VROOMAN
WESTBROOK
463443 m E
GARVEY
5258060 m N
383563 m E
5251895 m N
AUST
HAI
JOFFRE
HOLLIN
BISCOTASI
Biscotasi Lake
EDINBURGH
INVERNESS
HENNESSY
144
HUBBARD
ABNE
ELIZABETH
MARGARET
LILLIE
PAUDASH
BREBEUF
BLEWETT
IRIS
AVANA
MARQUETTE
BAYNES
SHELLEY
FULTON
BREADNER
BATTERSBY
DUBLIN
ONAPING
5206594 m N
5206594 m N
Onaping Lake
JASPER
ALTON
LAFLECHE
ATHLONE
MULDREW
FAIRBAIRN
383563 m E
436102 m E
0
10
20
Kilometres
LEGEND
Massive granodiorite to granite
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Mafic to ultramafic rocks
Migmatized supracrustal rocks
Coarse clastic metasedimentary rocks
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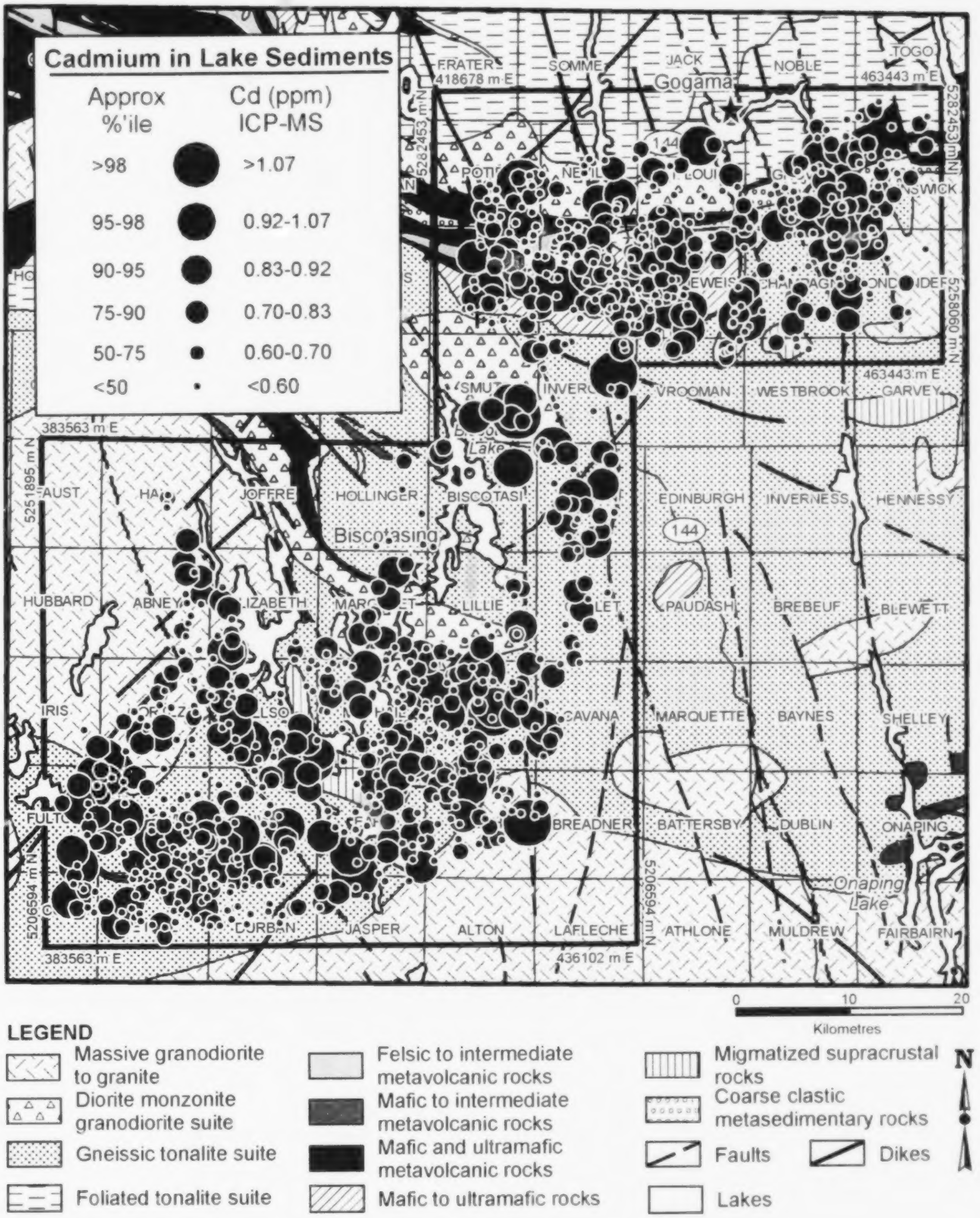
Lakes
N


Cadmium in Lake Sediments
Approx %'ile
Cd (ppm) ICP-MS
>98 >1.07
95-98 0.92-1.07
90-95 0.83-0.92
75-90 0.70-0.83
50-75 0.60-0.70
<50 <0.60
FRATER
SOMME
JACK
NOBLE
TOGO
Gogama
418678 m E
463443 m E
5282453 m N
144
POTIER
NEWTON
LOUIS
BRUNSWICK
NEWEIS
CHAMPAGNE
LONDONDERRY
5258060 m N
SMUTS
INVERCLYDE
VROOMAN
WESTBROOK
GARVEY
463443 m E
383563 m E
5251895 m N
FAUST
JOFFRE
HOLLINGER
BISCOTASI
Biscotasing
Lake
EDINBURGH
INVERNESS
HENNESSY
HUBBARD
ABNEY
ELIZABETH
LILLIE
PAUDASH
BREBEUF
BLEWETT
IRIS
CAVANA
MARQUETTE
BAYNES
SHELLEY
BREADNER
BATTERSBY
DUBLIN
ONAPING
Onaping Lake
5206594 m N
DURBAN
JASPER
ALTON
LAFLECHE
ATHLONE
MULDREW
FAIRBAIRN
383563 m E
436102 m E
0 10 20
Kilometres
LEGEND
Massive granodiorite to granite
Diorite monzonite granodiorite suite
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Foliated tonalite suite
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Mafic and ultramafic metavolcanic rocks
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Migmatized supracrustal rocks
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Faults
Dikes
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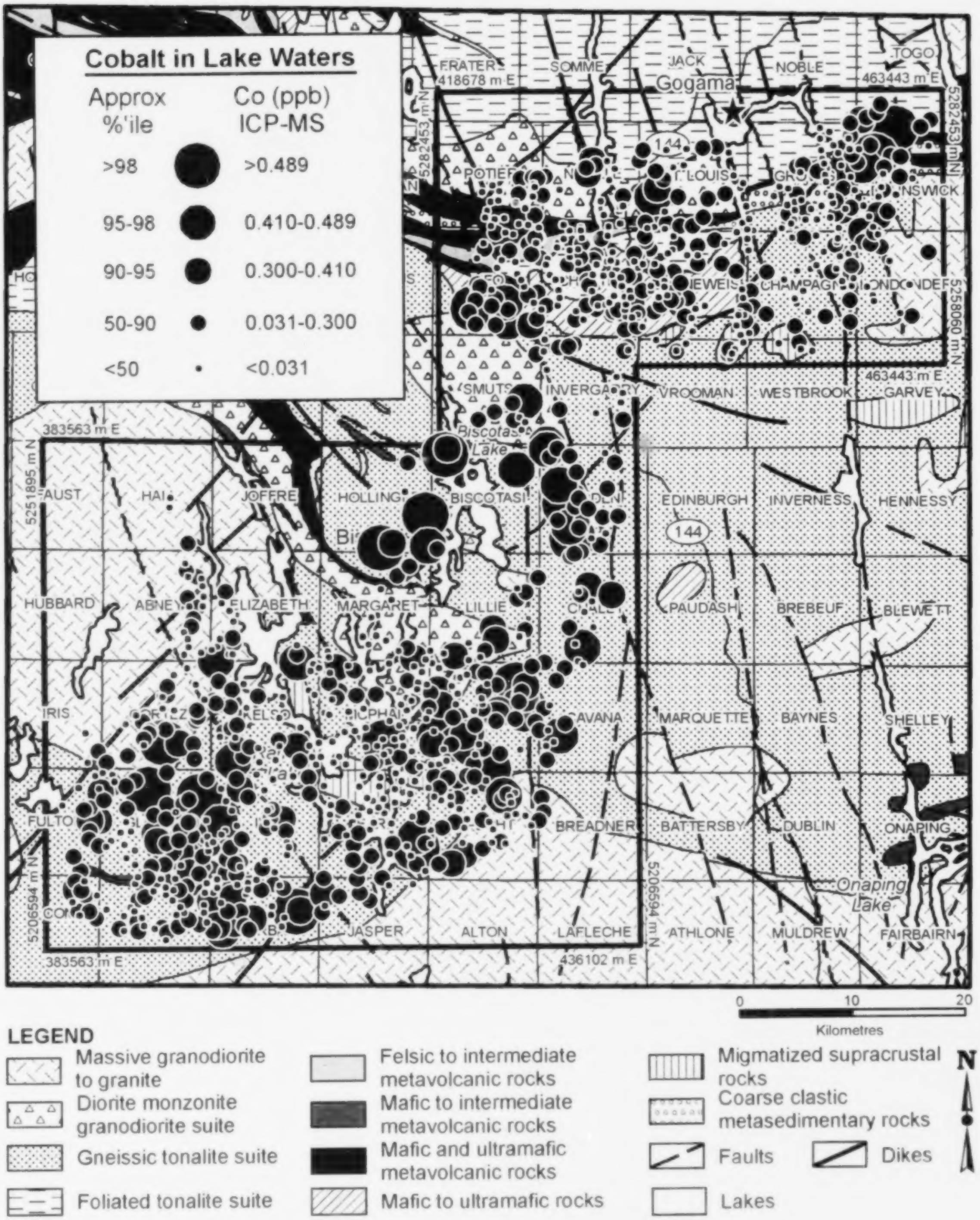
Cobalt in Lake Waters
Approx %'ile
Co (ppb) ICP-MS
>98 >0.489
95-98 0.410-0.489
90-95 0.300-0.410
50-90 0.031-0.300
<50 <0.031
FRATER
418678 m E
SOMME
JACK
Gogama
NOBLE
TOGO
463443 m E
5282453 m N
POTIER
ST. LOUIS
BRUNSWICK
CHEWEIS
CHAMPAGNE
MONDONDEF
5258060 m N
463443 m E
SMUTS
INVERGARRY
VROOMAN
WESTBROOK
GARVEY
Biscotasi Lake
383563 m E
5251895 m N
FAUST
HALI
JOFFRE
HOLLINGER
BISCOTASI
DENI
EDINBURGH
INVERNESS
HENNESSY
144
HUBBARD
ABNEY
ELIZABETH
MARGARET
LILLIE
CHALLENER
PAUDASH
BREBEUF
BLEWETT
IRIS
CORTEZ
KELSO
MCPHAIL
CAVANA
MARQUETTE
BAYNES
SHELLEY
FULTON
BREADNER
BATTERSBY
DUBLIN
ONAPING
5206594 m N
Onaping Lake
JASPER
ALTON
LAFLECHE
ATHLONE
MULDREW
FAIRBAIRN
383563 m E
436102 m E
0
10
20
Kilometres
LEGEND
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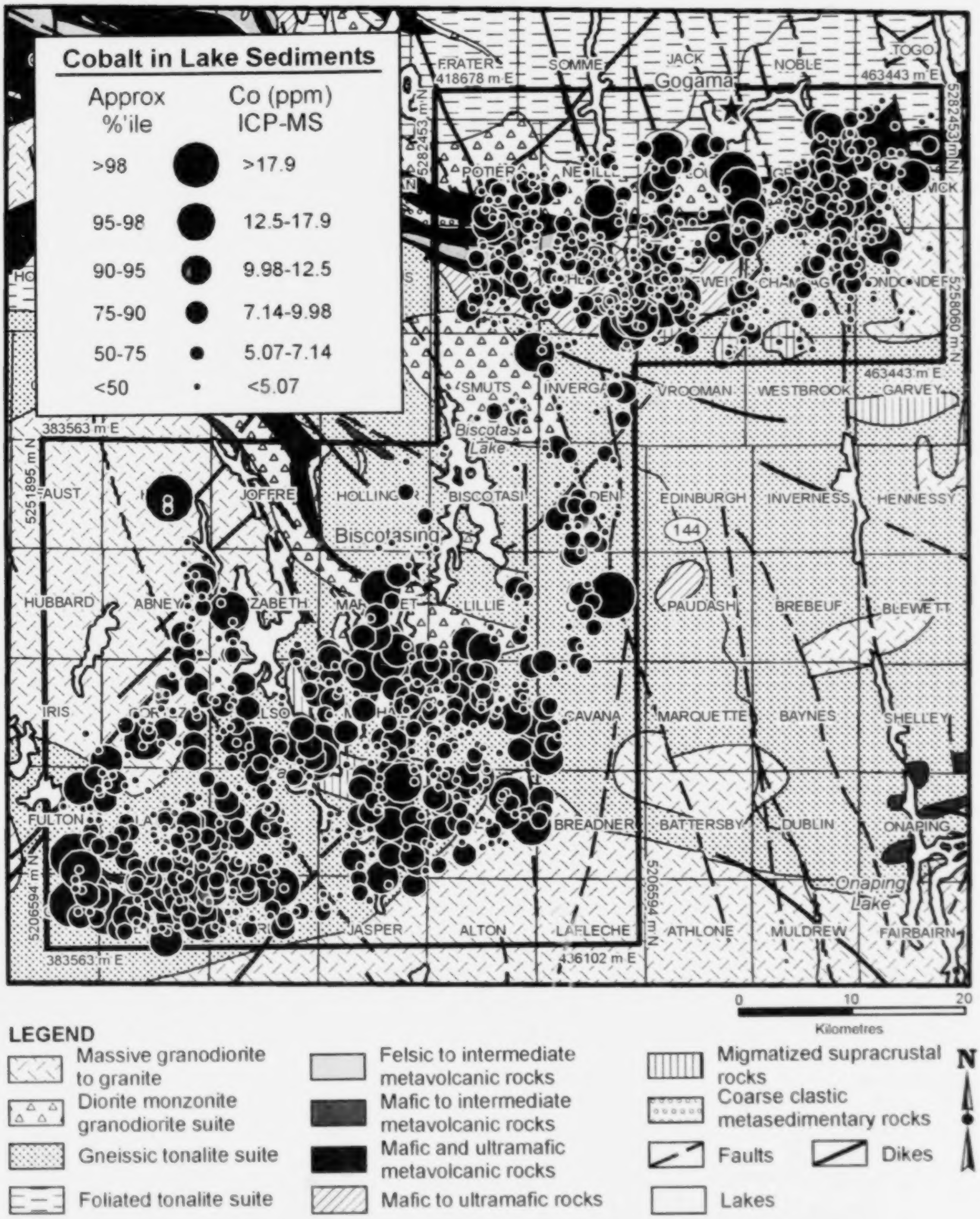
Cobalt in Lake Sediments
Approx %'ile
Co (ppm) ICP-MS
>98 >17.9
95-98 12.5-17.9
90-95 9.98-12.5
75-90 7.14-9.98
50-75 5.07-7.14
<50 <5.07
FRATER
418678 m E
SOMME
JACK
Gogama
NOBLE
TOGO
463443 m E
5282453 m N
POTIER
5258060 m N
463443 m E
SMUTS
VROOMAN
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GARVEY
Biscotasi Lake
383563 m E
5251895 m N
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HENNESSY
144
Biscotasing
HUBBARD
ABNEY
LILLIE
PAUDASH
BREBEUF
BLEWETT
IRIS
CAVANA
MARQUETTE
BAYNES
SHELLEY
FULTON
BREADNER
BATTERSBY
DUBLIN
ONAPING
5206594 m N
Onaping Lake
JASPER
ALTON
LAFLECHE
ATHLONE
MULDREW
FAIRBAIRN
383563 m E
436102 m E
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Kilometres
N
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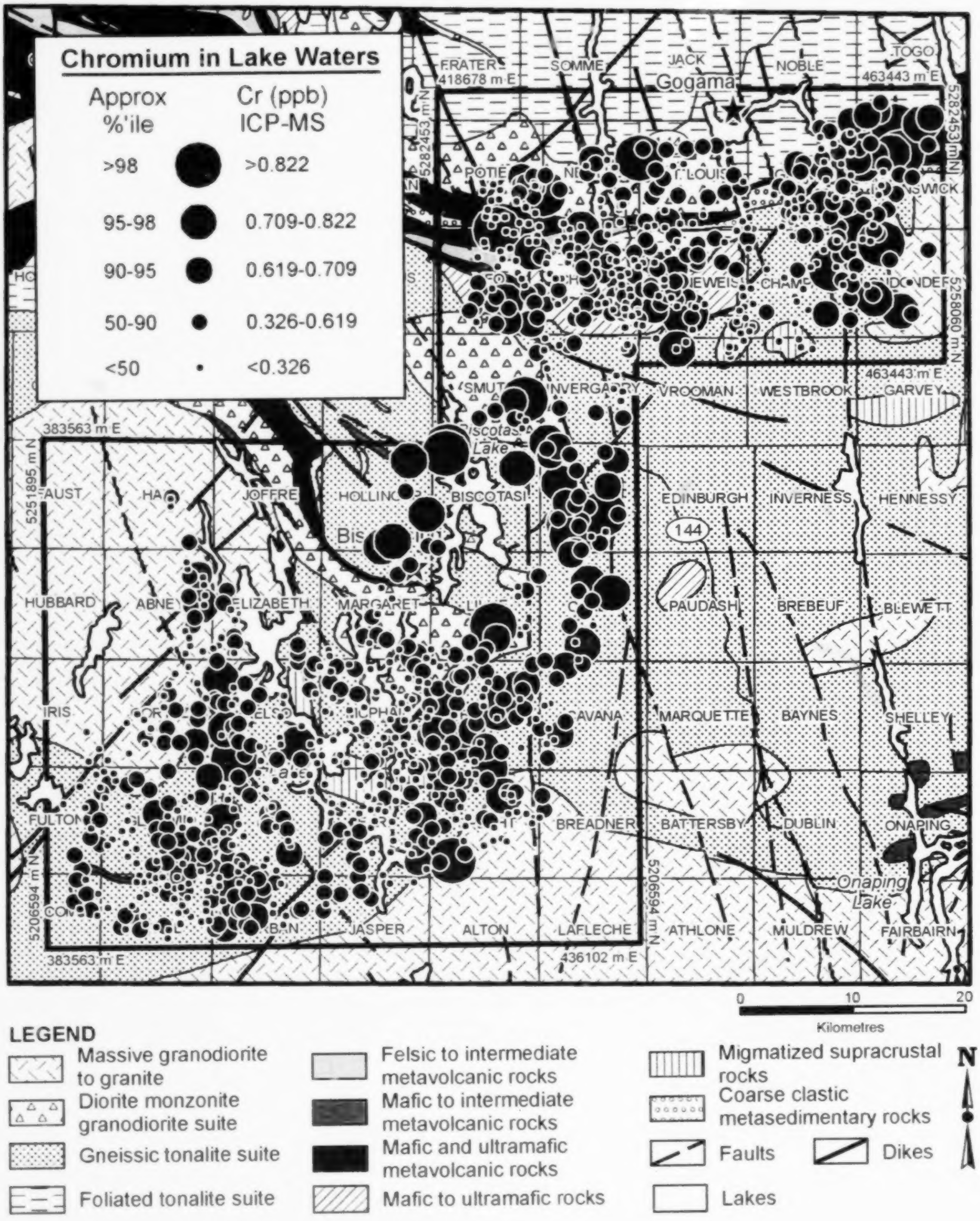
Dikes
Lakes

Chromium in Lake Waters
Approx %'ile
Cr (ppb) ICP-MS
>98
>0.822
95-98
0.709-0.822
90-95
0.619-0.709
50-90
0.326-0.619
<50
<0.326
FRATER
418678 m E
SOMME
JACK
Gogama
NOBLE
TOGO
463443 m E
5282453 m N
POTIER
LOUIS
SWICK
NEWEIS
CHAMP
DONDER
5258060 m N
463443 m E
SMUTS
INVERGARRY
VROOMAN
WESTBROOK
GARVEY
383563 m E
Biscotasi Lake
5251895 m N
FAUST
HALL
JOFFRE
HOLLINGER
BISCOTASI
EDINBURGH
INVERNESS
HENNESSY
144
HUBBARD
ABNEY
ELIZABETH
MARGARET
PAUDASH
BREBEUF
BLEWETT
IRIS
CAVANA
MARQUETTE
BAYNES
SHELLEY
FULTON
BREADNER
BATTERSBY
DUBLIN
ONAPING
5206594 m N
Onaping Lake
JASPER
ALTON
LAFLECHE
ATHLONE
MULDREW
FAIRBAIRN
383563 m E
436102 m E
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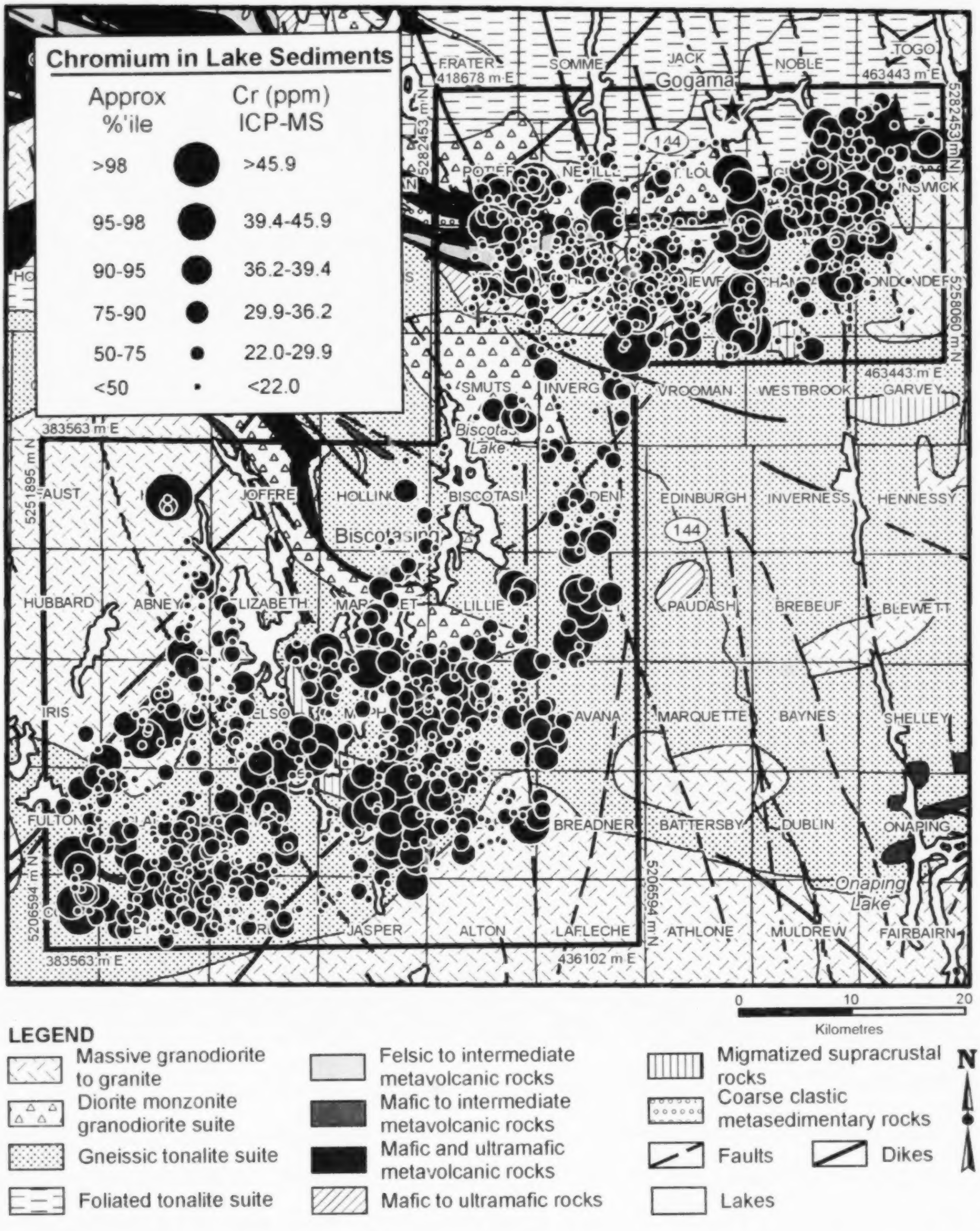
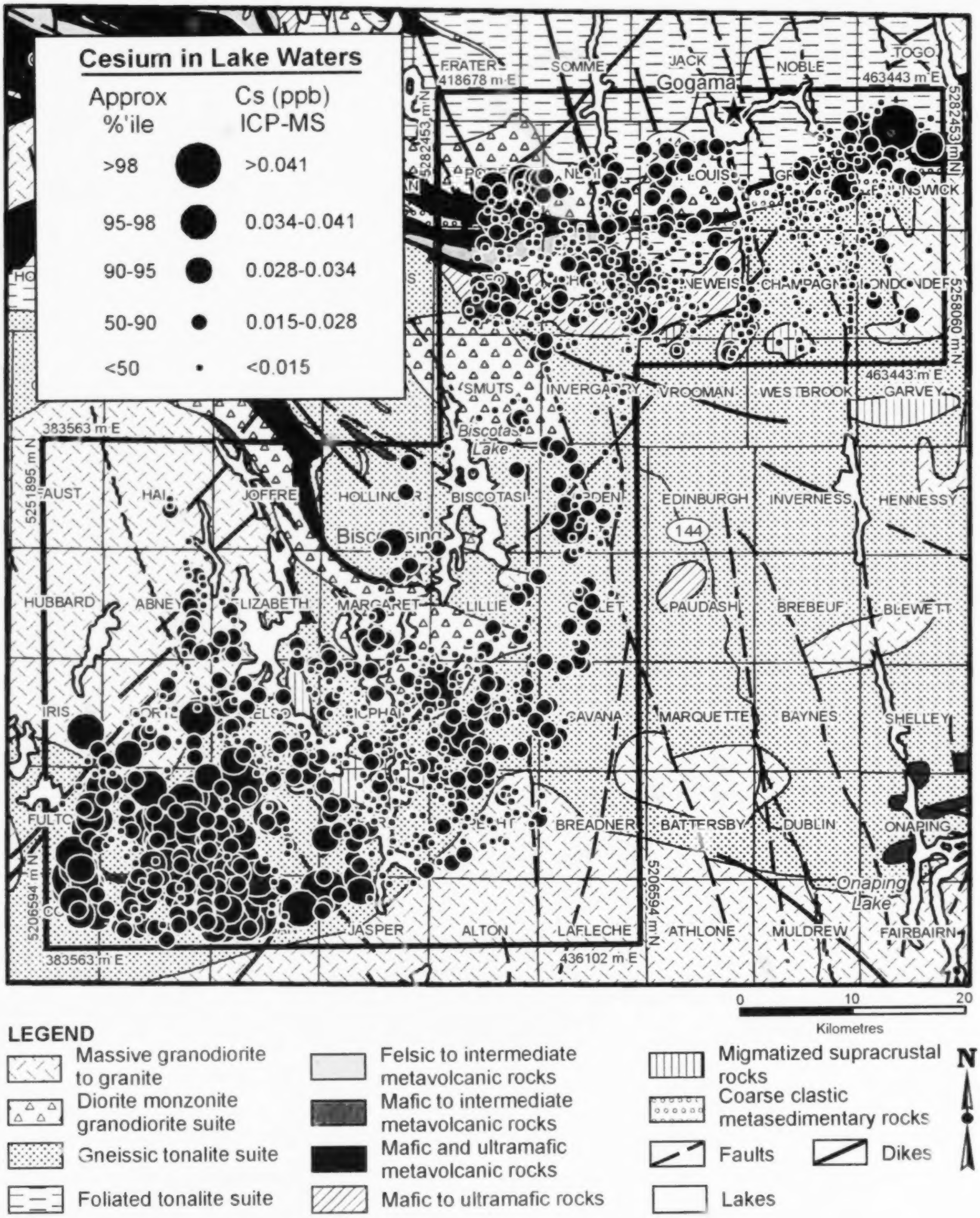
N


Chromium in Lake Sediments
Approx %'ile
Cr (ppm) ICP-MS
>98 ● >45.9
95-98 ● 39.4-45.9
90-95 ● 36.2-39.4
75-90 ● 29.9-36.2
50-75 ● 22.0-29.9
<50 • <22.0
FRATER
418678 m E
SOMME
JACK
Gogama
NOBLE
TOGO
463443 m E
5282453 m N
5282453 m N
144
POTIER
NEVILLE
INSWICK
CHAMP
ONDONDEF
5258060 m N
463443 m E
SMUTS
INVERG
VROOMAN
WESTBROOK
GARVEY
Biscotasi Lake
383563 m E
5251895 m N
FAUST
JOFFRE
HOLLIN
BISCOTASI
EDINBURGH
INVERNESS
HENNESSY
Biscotasing
144
HUBBARD
ABNEY
ELIZABETH
LILLIE
PAUDASH
BREBEUF
BLEWETT
IRIS
CAVANA
MARQUETTE
BAYNES
SHELLEY
FULTON
BREADNER
BATTERSBY
DUBLIN
ONAPING
5206594 m N
5206594 m N
Onaping Lake
JASPER
ALTON
LAFLECHE
ATHLONE
MULDREW
FAIRBAIRN
383563 m E
436102 m E
0
10
20
Kilometres
LEGEND
Massive granodiorite to granite
Diorite monzonite granodiorite suite
Gneissic tonalite suite
Foliated tonalite suite
Felsic to intermediate metavolcanic rocks
Mafic to intermediate metavolcanic rocks
Mafic and ultramafic metavolcanic rocks
Mafic to ultramafic rocks
Migmatized supracrustal rocks
Coarse clastic metasedimentary rocks
Faults
Dikes
Lakes
N


Cesium in Lake Waters
Approx %'ile
Cs (ppb) ICP-MS
>98 >0.041
95-98 0.034-0.041
90-95 0.028-0.034
50-90 0.015-0.028
<50 <0.015
FRATER
418678 m E
SOMME
JACK
NOBLE
TOGO
463443 m E
Gogama
5282453 m N
LOUIS
NEWEIS
CHAMPAGNE
LONDONDERRY
5258060 m N
463443 m E
SMUTS
INVERGARRY
VROOMAN
WESTBROOK
GARVEY
Biscotasi Lake
383563 m E
5251895 m N
FAUST
HALL
JOFFRE
HOLLINGER
BISCOTASI
OGDEN
EDINBURGH
INVERNESS
HENNESSY
144
HUBBARD
ABNEY
ELIZABETH
MARGARET
LILLIE
PAUDASH
BREBEUF
BLEWETT
IRIS
CAVANA
MARQUETTE
BAYNES
SHELLEY
BREADNER
BATTERSBY
DUBLIN
ONAPING
5206594 m N
Onaping Lake
JASPER
ALTON
LAFLECHE
ATHLONE
MULDREW
FAIRBAIRN
383563 m E
436102 m E
0
10
20
Kilometres
LEGEND
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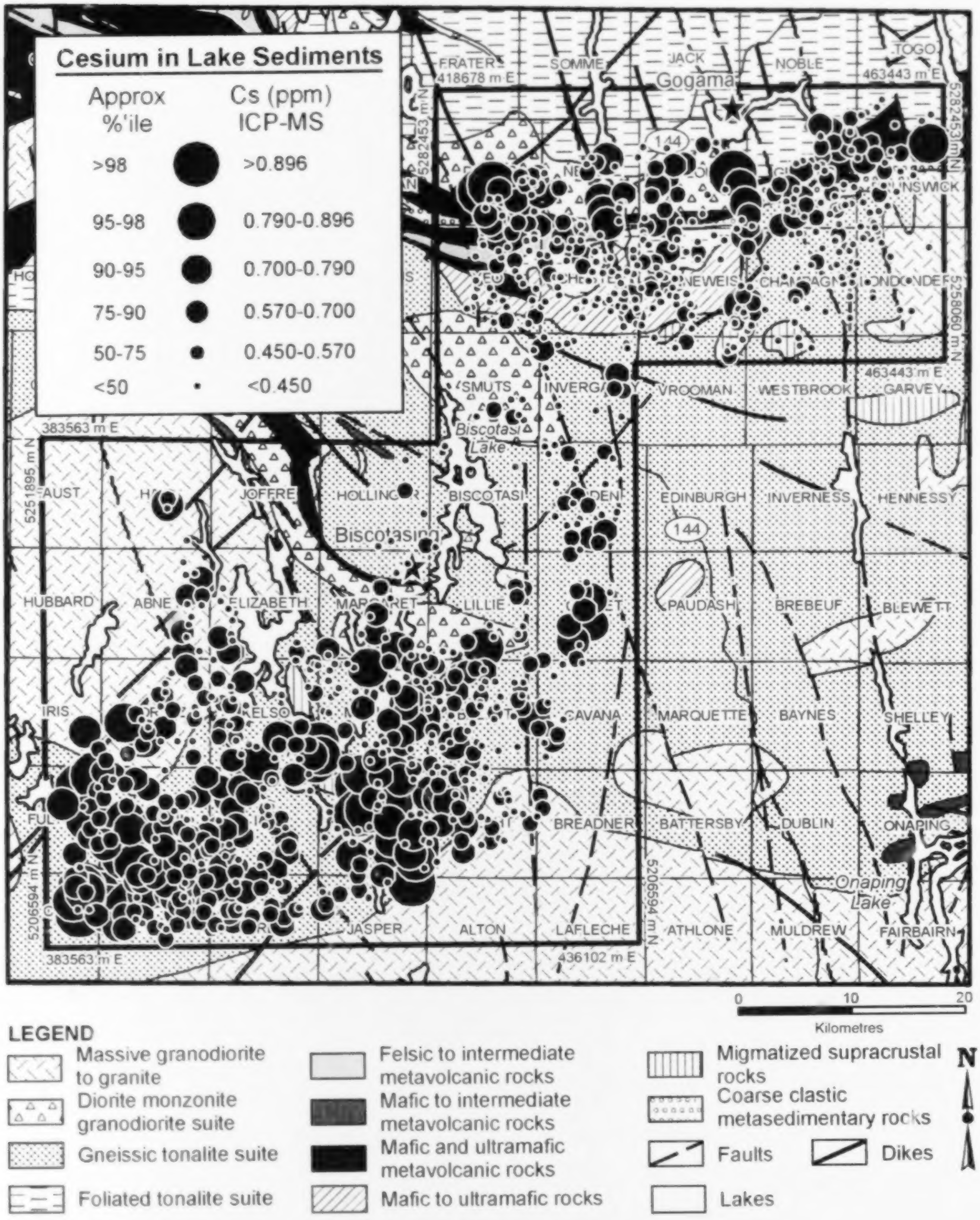
Mafic to ultramafic rocks
Migmatized supracrustal rocks
Coarse clastic metasedimentary rocks
Faults
Dikes
Lakes
N


Cesium in Lake Sediments
Approx %'ile
Cs (ppm) ICP-MS
>98
>0.896
95-98
0.790-0.896
90-95
0.700-0.790
75-90
0.570-0.700
50-75
0.450-0.570
<50
<0.450
FRATER
418678 m E
SOMME
JACK
Gogama
NOBLE
TOGO
463443 m E
5282453 m N
144
NEWEIS
CHAMPAGNE
5258060 m N
463443 m E
SMUTS
INVERGARRY
VROOMAN
WESTBROOK
GARVEY
Biscotasi Lake
383563 m E
5251895 m N
FAUST
JOFFRE
HOLLINGER
BISCOTASI
EDINBURGH
INVERNESS
HENNESSY
Biscotasing
HUBBARD
ABNEY
ELIZABETH
MARGARET
LILLIE
PAUDASH
BREBEUF
BLEWETT
IRIS
KELSO
CAVANA
MARQUETTE
BAYNES
SHELLEY
BREADNER
BATTERSBY
DUBLIN
ONAPING
Onaping Lake
5206594 m N
JASPER
ALTON
LAFLECHE
ATHLONE
MULDREW
FAIRBAIRN
383563 m E
436102 m E
0
10
20
Kilometres
LEGEND
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Mafic to ultramafic rocks
Migmatized supracrustal rocks
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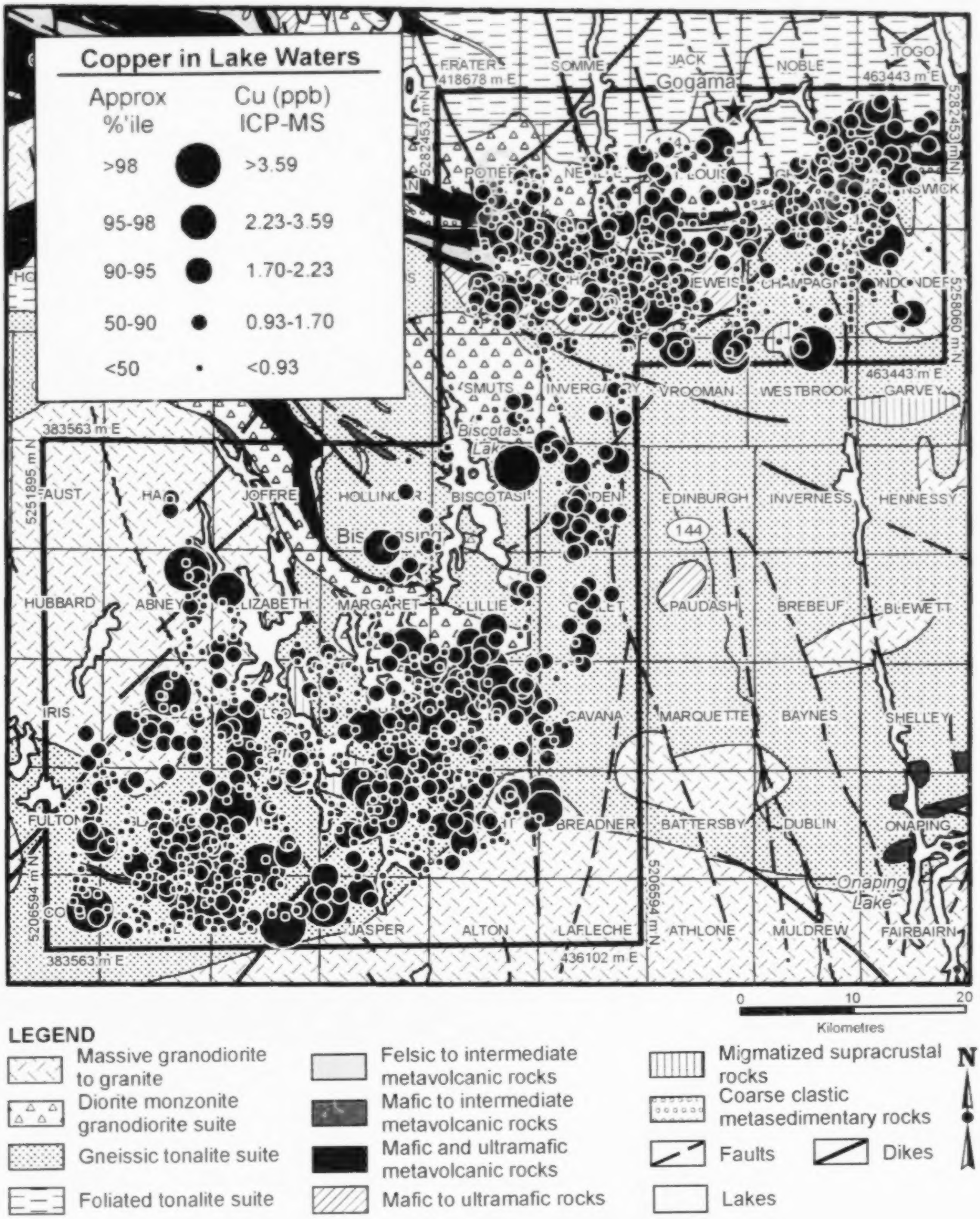
Faults
Dikes
Lakes
N


Copper in Lake Waters
Approx %'ile
Cu (ppb) ICP-MS
>98 >3.59
95-98 2.23-3.59
90-95 1.70-2.23
50-90 0.93-1.70
<50 <0.93
FRATER
418678 m E
SOMME
JACK
Gogama
NOBLE
TOGO
463443 m E
5282453 m N
POTIER
LOUIS
NSWICK
CHAMPAGNE
ONDONDEF
5258060 m N
463443 m E
SMUTS
INVERGARRY
VROOMAN
WESTBROOK
GARVEY
Biscotasi Lake
383563 m E
5251895 m N
FAUST
JOFFRE
HOLLINGER
BISCOTASI
EDINBURGH
INVERNESS
HENNESSY
144
Biscotasing
HUBBARD
ABNEY
ELIZABETH
MARGARET
LILLIE
PAUDASH
BREBEUF
BLEWETT
IRIS
CAVANA
MARQUETTE
BAYNES
SHELLEY
FULTON
BREADNER
BATTERSBY
DUBLIN
ONAPING
5206594 m N
Onaping Lake
JASPER
ALTON
LAFLECHE
ATHLONE
MULDREW
FAIRBAIRN
383563 m E
436102 m E
0
10
20
Kilometres
LEGEND
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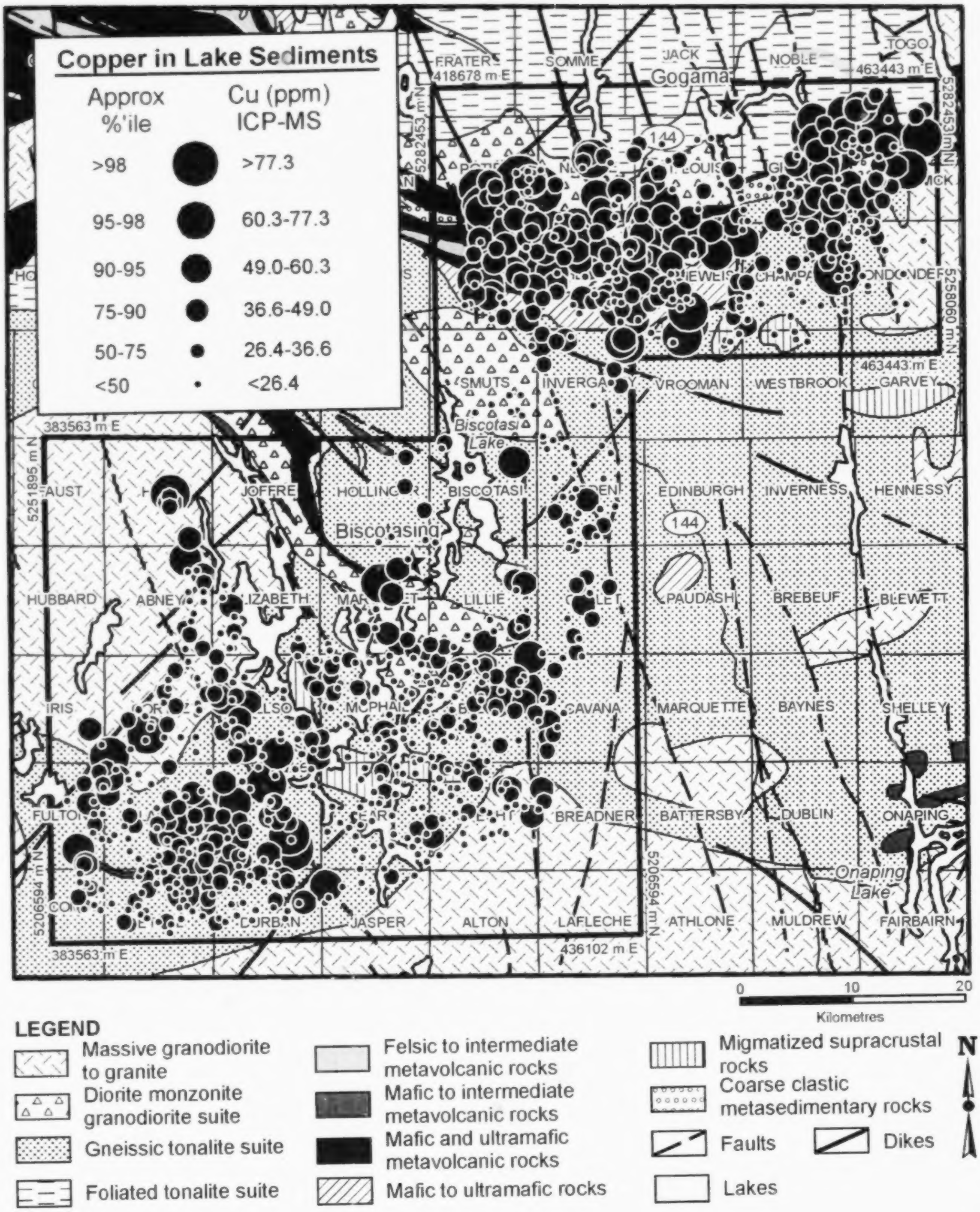
Dikes
Lakes
N



Copper in Lake Sediments
Approx %'ile
Cu (ppm) ICP-MS
>98 >77.3
95-98 60.3-77.3
90-95 49.0-60.3
75-90 36.6-49.0
50-75 26.4-36.6
<50 <26.4
FRATER
418678 m E
SOMME
JACK
NOBLE
TOGO
463443 m E
Gogama
144
5282453 m N
ST. LOUIS
CHAMPAGNE
ONDONDERY
5258060 m N
463443 m E
SMUTS
INVERGARRY
VROOMAN
WESTBROOK
GARVEY
Biscotasi Lake
383563 m E
5251895 m N
FAUST
JOFFRE
HOLLINGER
BISCOTASI
EDINBURGH
INVERNESS
HENNESSY
Biscotasing
HUBBARD
ABNEY
ELIZABETH
LILLIE
PAUDASH
BREBEUF
BLEWETT
IRIS
MCPHAIL
CAVANA
MARQUETTE
BAYNES
SHELLEY
FULTON
BREADNER
BATTERSBY
DUBLIN
ONAPING
5206594 m N
Onaping Lake
DURBAN
JASPER
ALTON
LAFLECHE
ATHLONE
MULDREW
FAIRBAIRN
436102 m E
383563 m E
0
10
20
Kilometres
LEGEND
Massive granodiorite to granite
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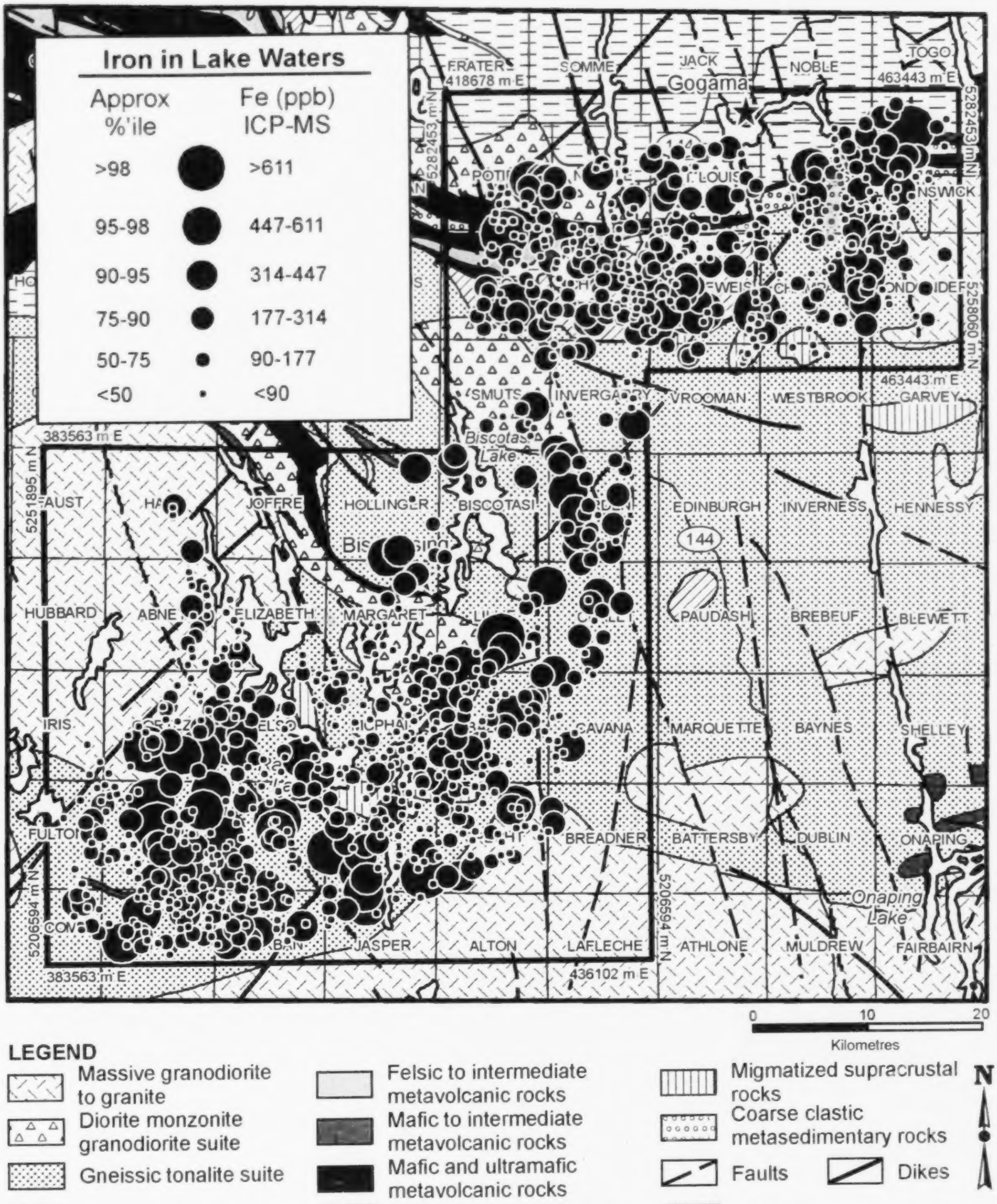
Dikes
Lakes
N


Iron in Lake Waters
Approx %'ile
Fe (ppb) ICP-MS
>98 ● >611
95-98 ● 447-611
90-95 ● 314-447
75-90 ● 177-314
50-75 ● 90-177
<50 • <90
FRATER
418678 m E
SOMME
JACK
Gogama
NOBLE
TOGO
463443 m E
5282453 m N
POTI
ST. LOUIS
NSWICK
WEIS
ONDIDER
5258060 m N
SMUTS
INVERGARRY
VROOMAN
WESTBROOK
463443 m E
GARVEY
383563 m E
Biscotasi Lake
5251895 m N
AUST
JOFFRE
HOLLINGER
BISCOTASI
EDINBURGH
INVERNESS
HENNESSY
144
HUBBARD
ABNE
ELIZABETH
MARGARET
PAUDASH
BREBEUF
BLEWETT
IRIS
CAVANA
MARQUETTE
BAYNES
SHELLEY
FULTON
BREADNER
BATTERSBY
DUBLIN
ONAPING
5206594 m N
Onaping Lake
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ALTON
LAFLECHE
ATHLONE
MULDREW
FAIRBAIRN
383563 m E
436102 m E
0
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20
Kilometres
LEGEND
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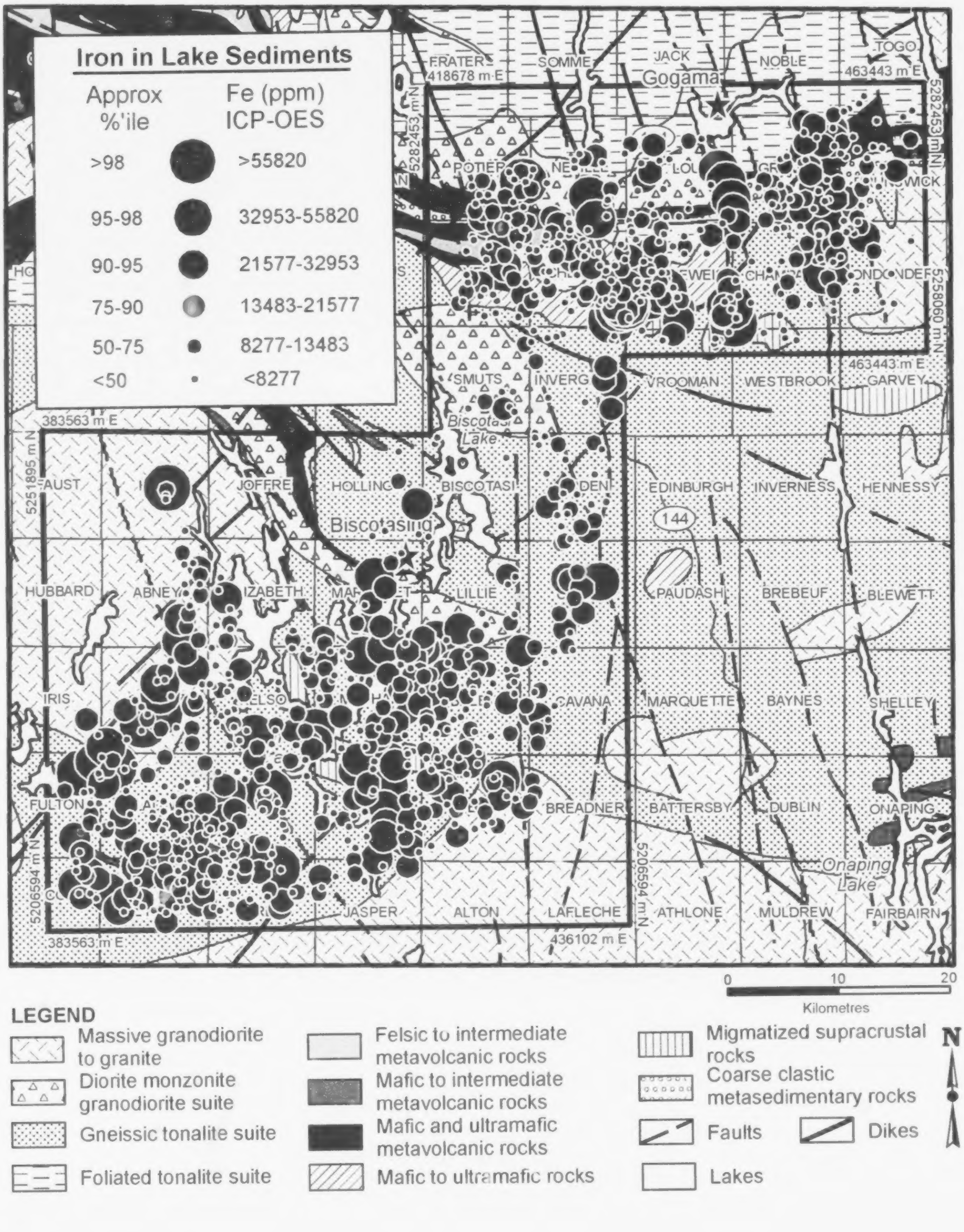
N


Iron in Lake Sediments
Approx %'ile
Fe (ppm) ICP-OES
>98 | >55820
95-98 | 32953-55820
90-95 | 21577-32953
75-90 | 13483-21577
50-75 | 8277-13483
<50 | <8277
FRATER
418678 m E
SOMME
JACK
Gogama
NOBLE
TOGO
463443 m E
5282453 m N
POTIER
5282453 m N
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5258060 m N
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GARVEY
SMUTS
INVERG
VROOMAN
WESTBROOK
383563 m E
Biscotasi Lake
5251895 m N
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HOLLING
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EDINBURGH
INVERNESS
HENNESSY
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Biscotasing
HUBBARD
ABNEY
IZABETH
LILLIE
PAUDASH
BREBEUF
BLEWETT
IRIS
CAVANA
MARQUETTE
BAYNES
SHELLEY
FULTON
BREADNER
BATTERSBY
DUBLIN
ONAPING
5206594 m N
5206594 m N
Onaping Lake
JASPER
ALTON
LAFLECHE
ATHLONE
MULDREW
FAIRBAIRN
383563 m E
436102 m E
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10
20
Kilometres
LEGEND
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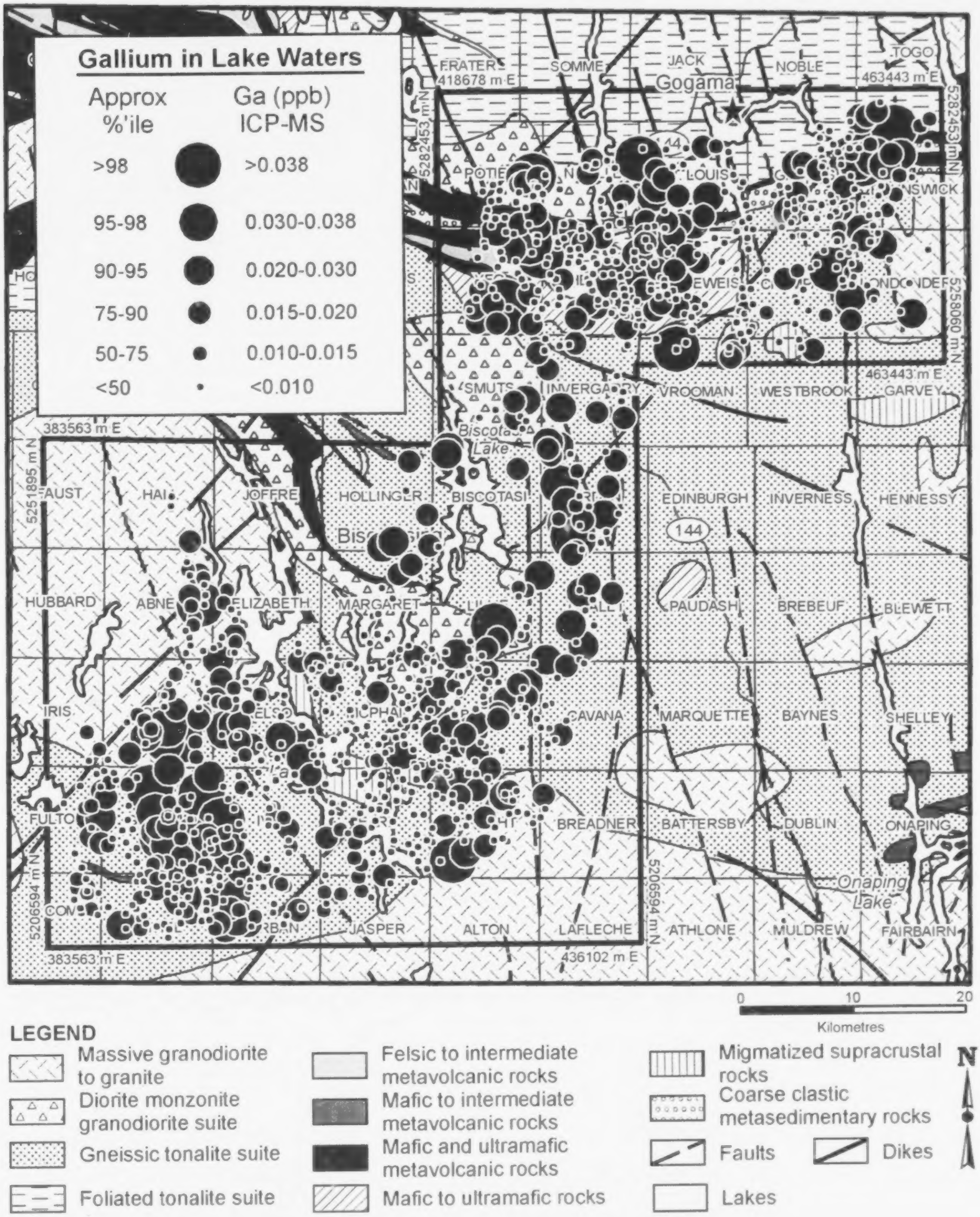
Lakes
N



Gallium in Lake Waters
Approx %'ile
Ga (ppb) ICP-MS
>98 >0.038
95-98 0.030-0.038
90-95 0.020-0.030
75-90 0.015-0.020
50-75 0.010-0.015
<50 <0.010
FRATER
418678 m E
SOMME
JACK
NOBLE
TOGO
463443 m E
Gogama
5282453 m N
POTIER
LOUIS
NSWICK
EWEIS
ONDONDEF
5258060 m N
463443 m E
SMUTS
INVERGARRY
VROOMAN
WESTBROOK
GARVEY
383563 m E
Biscotasi Lake
5251895 m N
FAUST
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JOFFRE
HOLLINGER
BISCOTASI
EDINBURGH
INVERNESS
HENNESSY
144
HUBBARD
ABNEY
ELIZABETH
MARGARET
PAUDASH
BREBEUF
BLEWETT
IRIS
CAVANA
MARQUETTE
BAYNES
SHELLEY
FULTON
BREADNER
BATTERSBY
DUBLIN
ONAPING
5206594 m N
Onaping Lake
COM
JASPER
ALTON
LAFLECHE
ATHLONE
MULDREW
FAIRBAIRN
383563 m E
436102 m E
0
10
20
Kilometres
LEGEND
Massive granodiorite to granite
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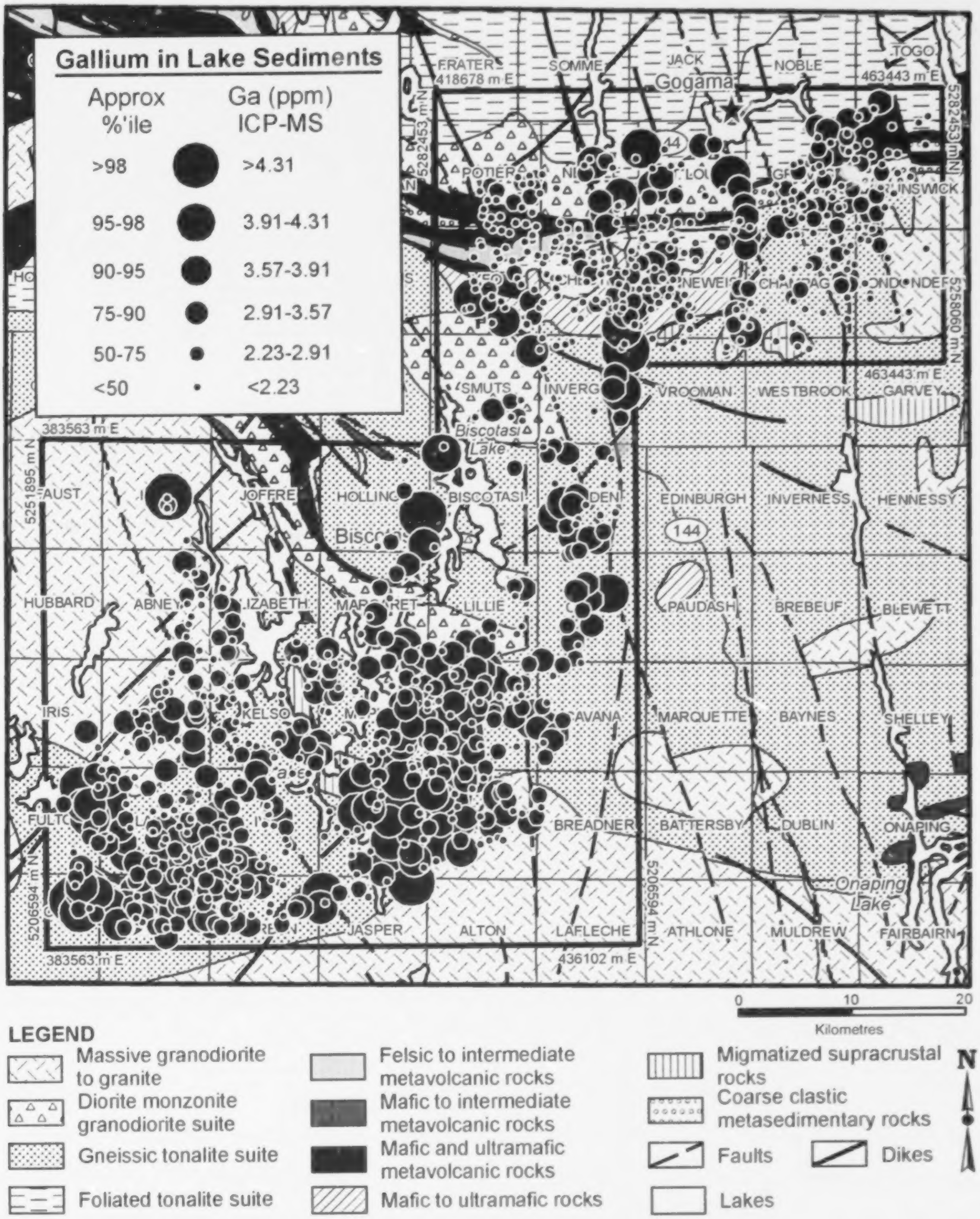
Gallium in Lake Sediments
Approx %'ile
Ga (ppm) ICP-MS
>98
>4.31
95-98
3.91-4.31
90-95
3.57-3.91
75-90
2.91-3.57
50-75
2.23-2.91
<50
<2.23
FRATER
418678 m E
SOMME
JACK
Gogama
NOBLE
TOGO
463443 m E
5282453 m N
POTIER
NEWEI
CHAMPAG
5258060 m N
463443 m E
SMUTS
INVERG
VROOMAN
WESTBROOK
GARVEY
383563 m E
Biscotasi Lake
5251895 m N
FAUST
JOFFRE
HOLLING
BISCOTASI
EDINBURGH
INVERNESS
HENNESSY
144
HUBBARD
ABNEY
ELIZABETH
LILLIE
PAUDASH
BREBEUF
BLEWETT
IRIS
KELSO
CAVANA
MARQUETTE
BAYNES
SHELLEY
FULTO
BREADNER
BATTERSBY
DUBLIN
ONAPING
5206594 m N
Onaping Lake
JASPER
ALTON
LAFLECHE
ATHLONE
MULDREW
FAIRBAIRN
383563 m E
436102 m E
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10
20
Kilometres
LEGEND
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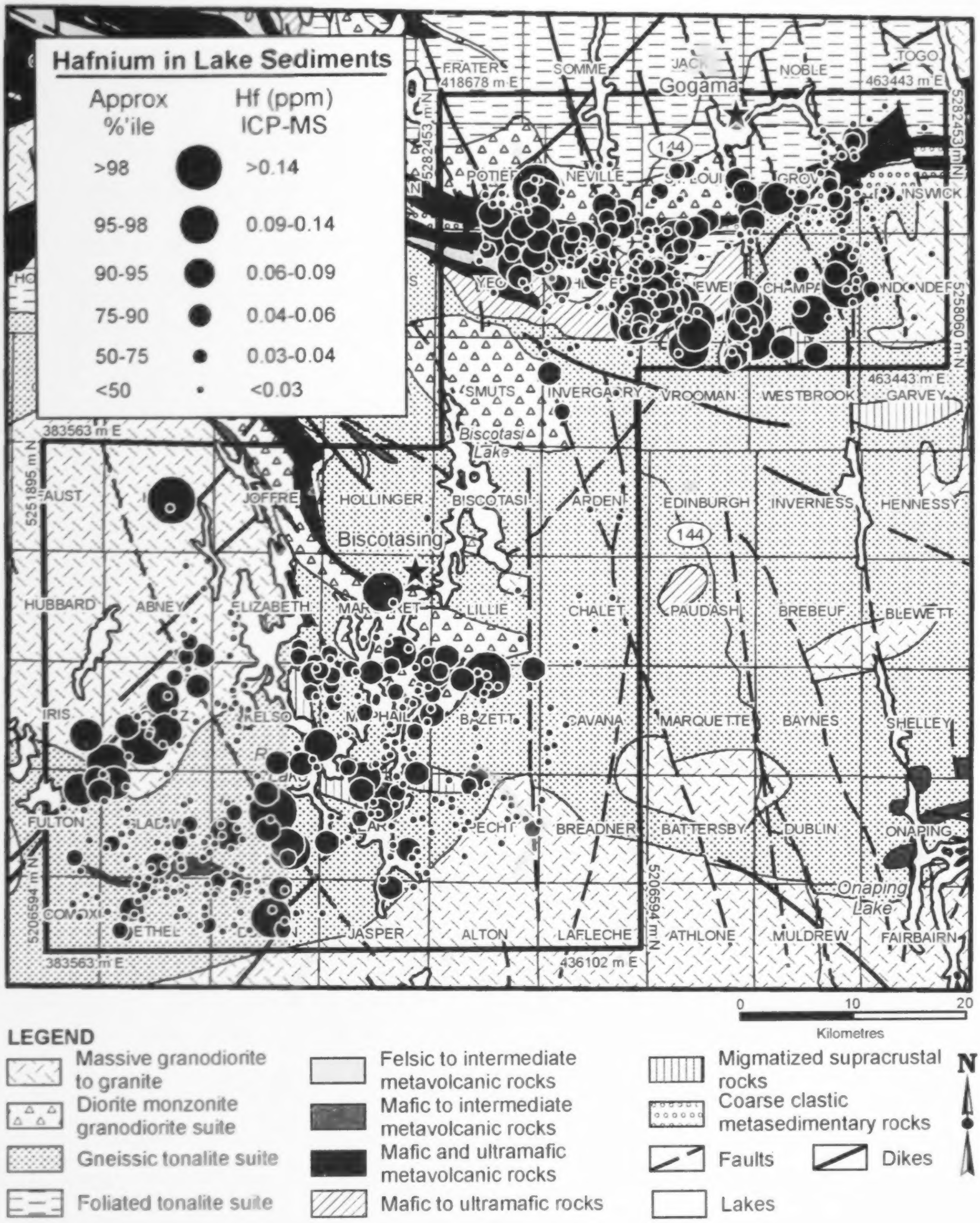
Hafnium in Lake Sediments
Approx %'ile
Hf (ppm) ICP-MS
>98 >0.14
95-98 0.09-0.14
90-95 0.06-0.09
75-90 0.04-0.06
50-75 0.03-0.04
<50 <0.03
FRATER
418678 m E
SOMME
JACK
NOBLE
TOGO
463443 m E
Gogama
5282453 m N
144
POTIER
NEVILLE
GROV
INSWICK
YEO
EWEI
CHAMPA
NDONDEF
5258060 m N
463443 m E
SMUTS
INVERGARRY
VROOMAN
WESTBROOK
GARVEY
Biscotasi Lake
383563 m E
5251895 m N
FAUST
JOFFRE
HOLLINGER
BISCOTASI
ARDEN
EDINBURGH
INVERNESS
HENNESSY
Biscotasing
HUBBARD
ABNEY
ELIZABETH
LILLIE
CHALET
PAUDASH
BREBEUF
BLEWETT
IRIS
KELSO
MCPHAIL
BAZETT
CAVANA
MARQUETTE
BAYNES
SHELLEY
FULTON
ECHT
BREADNER
BATTERSBY
DUBLIN
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5206594 m N
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COMOXI
ETHEL
JASPER
ALTON
LAFLECHE
ATHLONE
MULDREW
FAIRBAIRN
383563 m E
436102 m E
0
10
20
Kilometres
LEGEND
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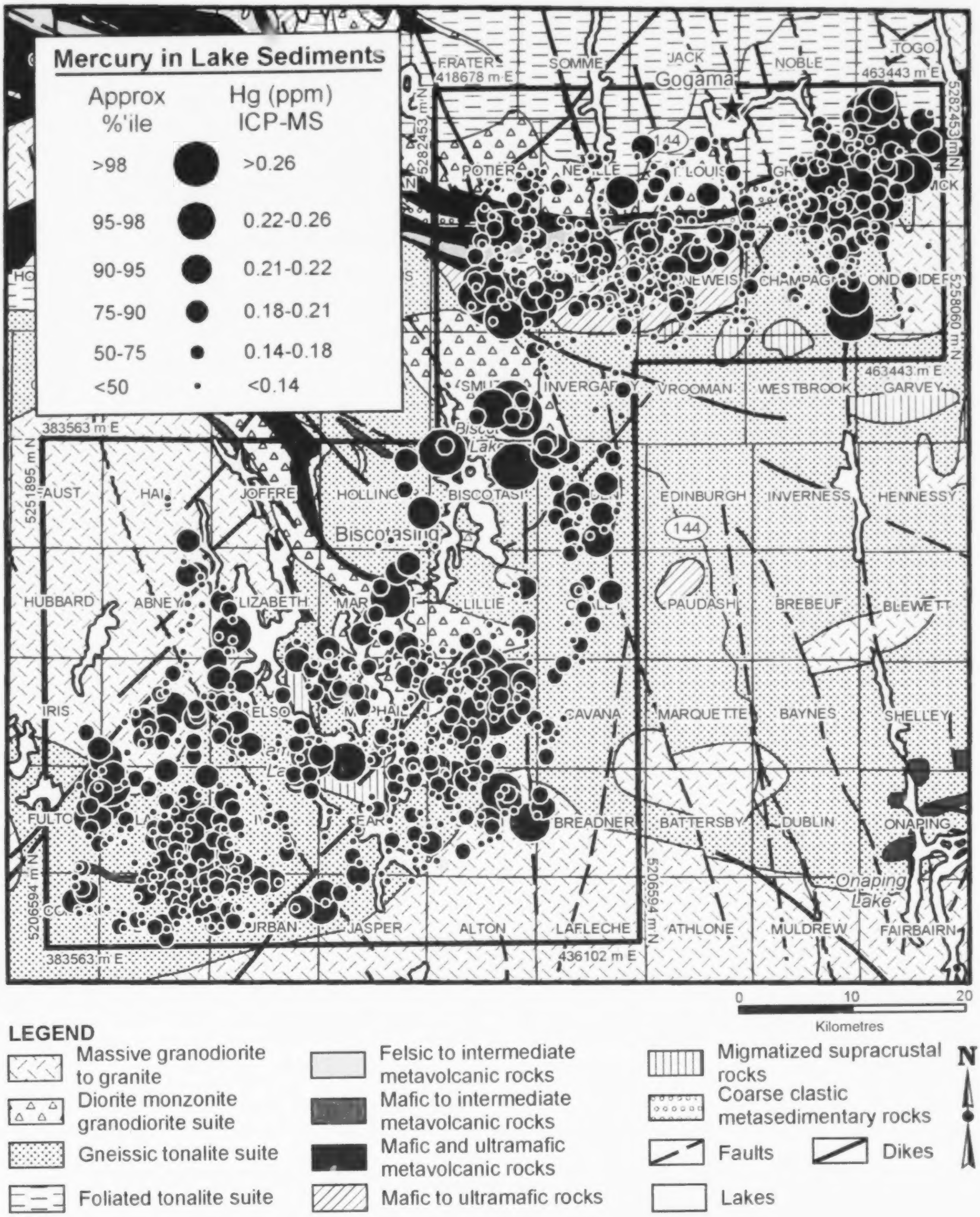
Mercury in Lake Sediments
Approx %'ile
Hg (ppm) ICP-MS
>98 >0.26
95-98 0.22-0.26
90-95 0.21-0.22
75-90 0.18-0.21
50-75 0.14-0.18
<50 <0.14
FRATER 418678 m E
SOMME
JACK
Gogama
NOBLE
TOGO
463443 m E
5282453 m N
POTIER
NEVILLE
ST. LOUIS
144
NEWEIS
CHAMPAGNE
ONDAGIDE
5258060 m N
463443 m E
SMUTS
INVERGARRY
VROOMAN
WESTBROOK
GARVEY
383563 m E
5251895 m N
FAUST
HALL
JOFFRE
HOLLINGER
Biscotasi Lake
BISCOTASI
EDINBURGH
INVERNESS
HENNESSY
Biscotasing
HUBBARD
ABNEY
ELIZABETH
LILLIE
PAUDASH
BREBEUF
BLEWETT
IRIS
KELSO
MACPHAIL
CAVANA
MARQUETTE
BAYNES
SHELLEY
FULTON
BREADNER
BATTERSBY
DUBLIN
ONAPING
5206594 m N
Onaping Lake
URBAN
JASPER
ALTON
LAFLECHE
ATHLONE
MULDREW
FAIRBAIRN
383563 m E
436102 m E
0 10 20
Kilometres
N
LEGEND
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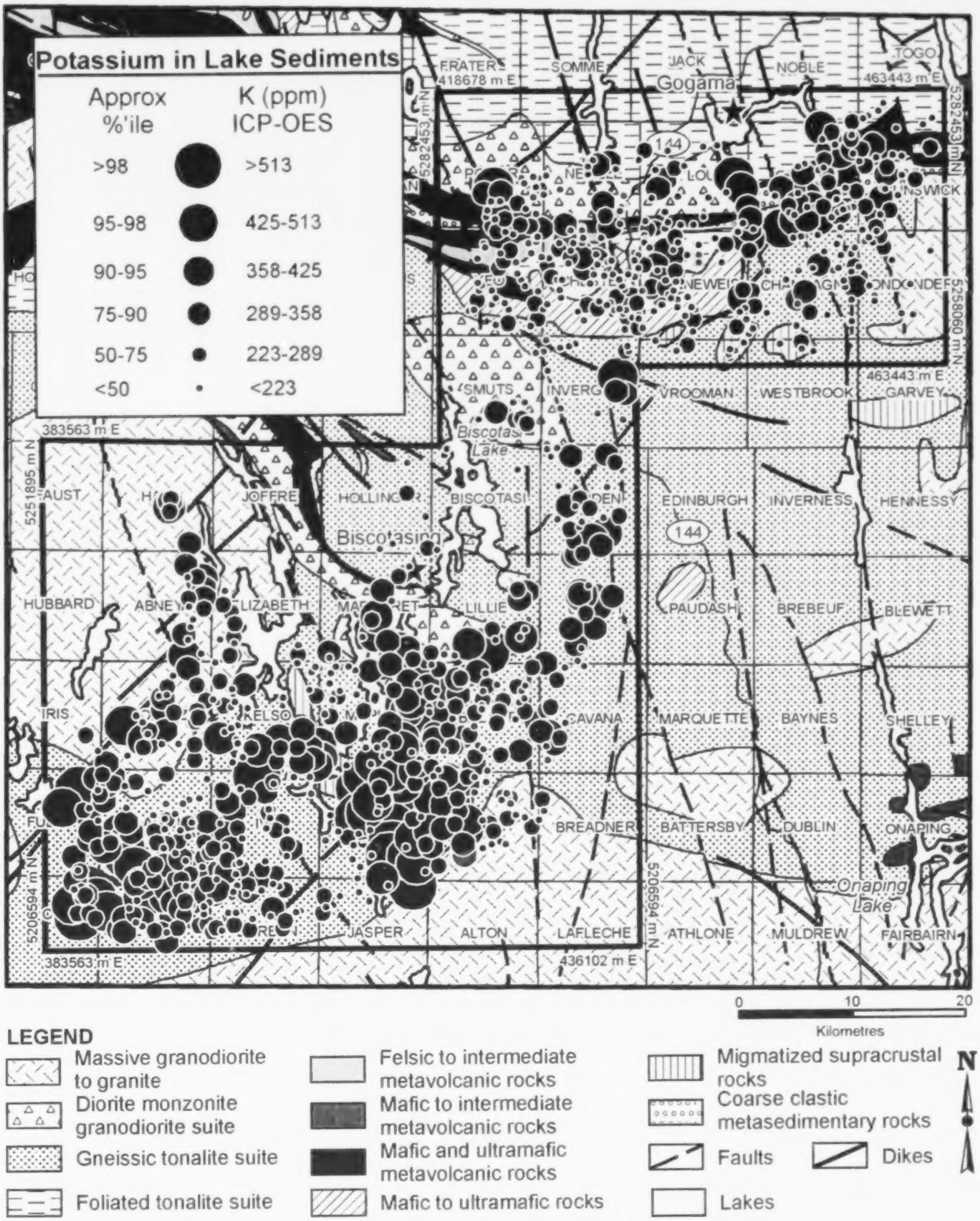
Potassium in Lake Sediments
Approx %'ile
K (ppm) ICP-OES
>98 >513
95-98 425-513
90-95 358-425
75-90 289-358
50-75 223-289
<50 <223
FRATER
418678 m E
SOMME
JACK
Gogama
NOBLE
TOGO
463443 m E
5282453 m N
144
5258060 m N
463443 m E
SMUTS
INVERG
VROOMAN
WESTBROOK
GARVEY
Biscotasi Lake
383563 m E
5251895 m N
FAUST
JOFFRE
HOLLINGER
BISCOTASI
EDINBURGH
INVERNESS
HENNESSY
Biscotasing
HUBBARD
ABNEY
LIZABETH
LILLIE
PAUDASH
BREBEUF
BLEWETT
IRIS
KELSO
CAVANA
MARQUETTE
BAYNES
SHELLEY
BREADNER
BATTERSBY
DUBLIN
ONAPING
5206594 m N
Onaping Lake
JASPER
ALTON
LAFLECHE
ATHLONE
MULDREW
FAIRBAIRN
383563 m E
436102 m E
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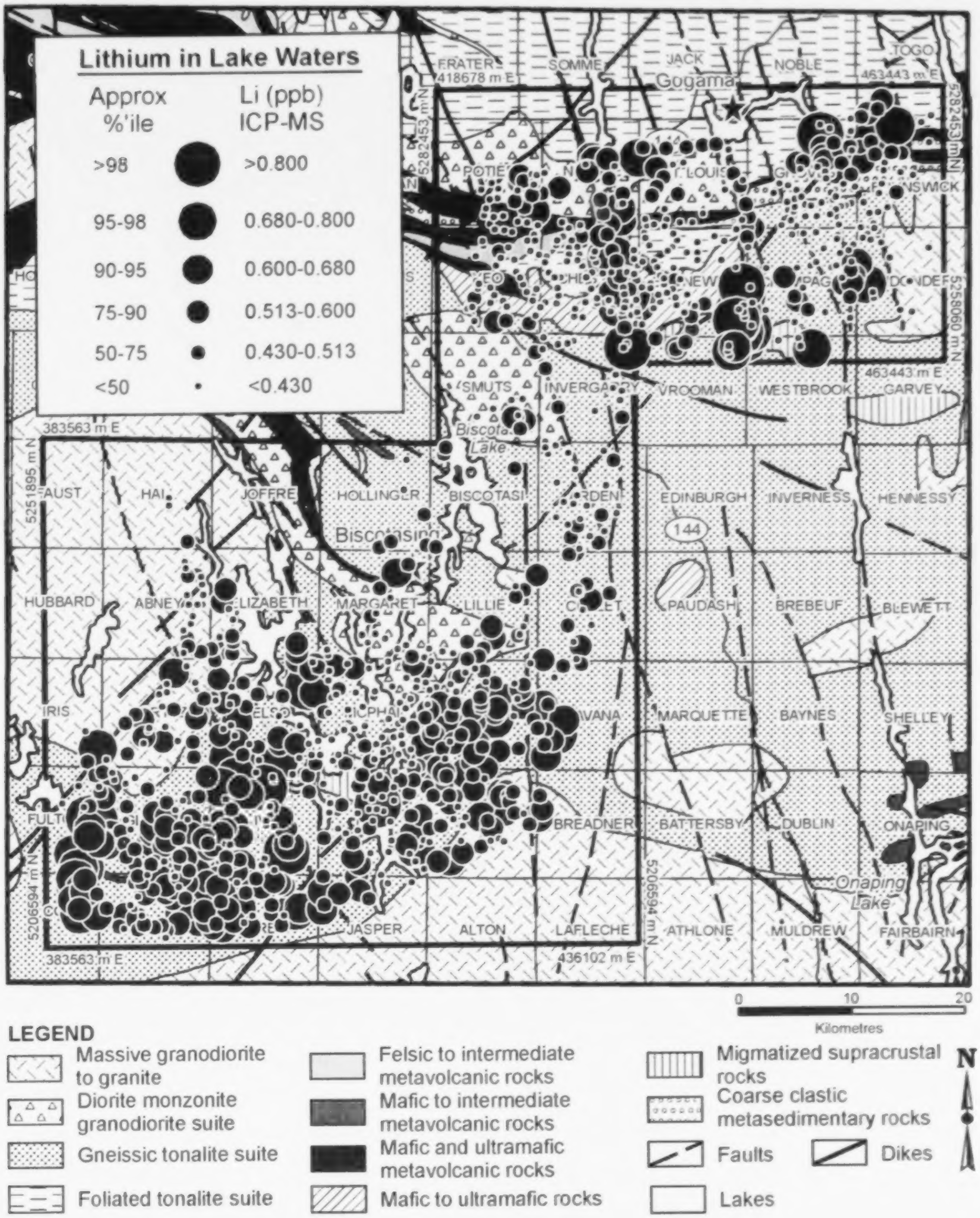
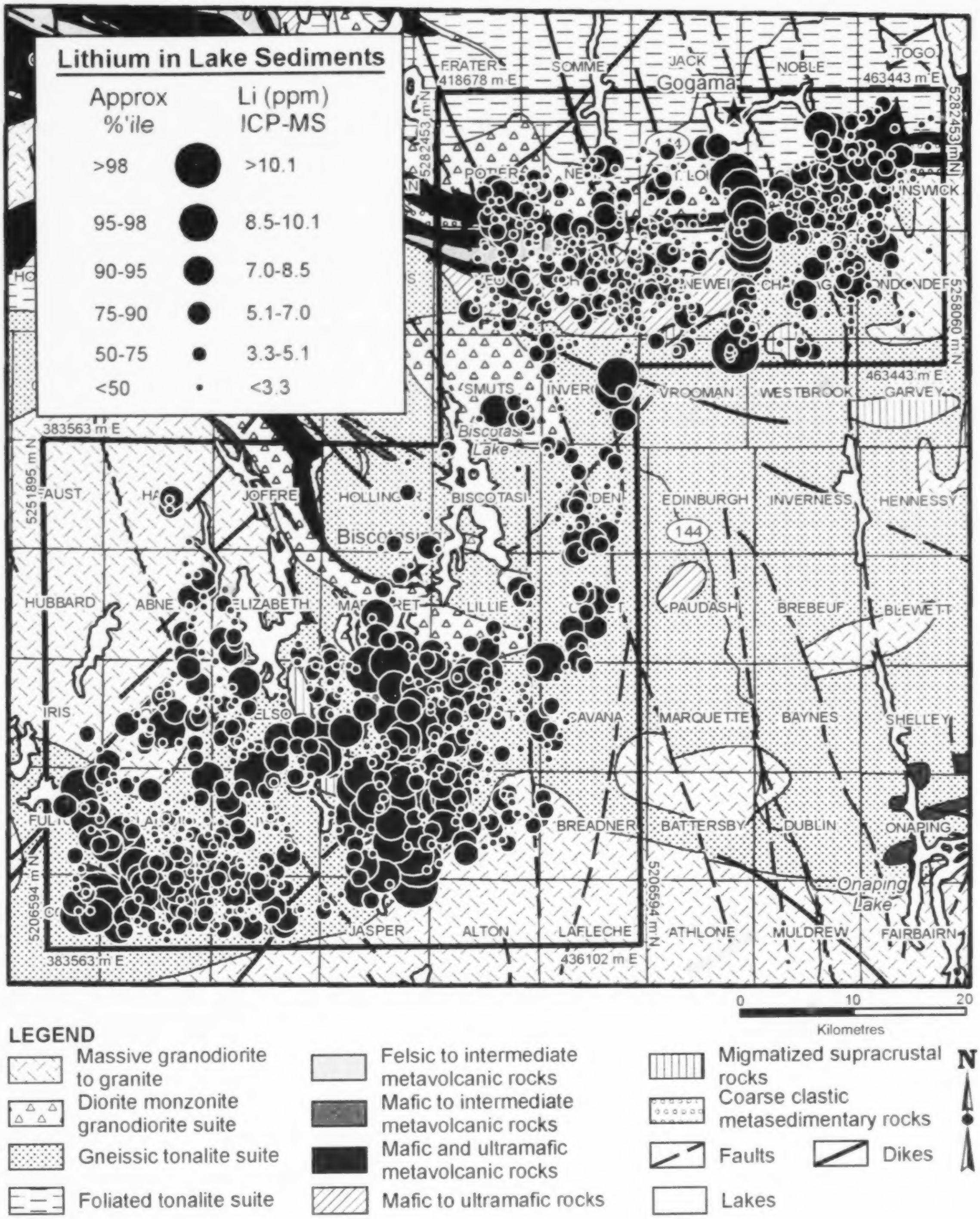
Lakes
N


Lithium in Lake Waters
Approx %'ile
Li (ppb) ICP-MS
>98 ● >0.800
95-98 ● 0.680-0.800
90-95 ● 0.600-0.680
75-90 ● 0.513-0.600
50-75 • 0.430-0.513
<50 · <0.430
FRATER
418678 m E
SOMME
JACK
Gogama
NOBLE
TOGO
463443 m E
5282453 m N
POTIER
ST. LOUIS
BRUNSWICK
FOY
CHESTER
NEWTON
DONDEF
5258060 m N
463443 m E
SMUTS
INVERGARRY
VROOMAN
WESTBROOK
GARVEY
383563 m E
Biscotasi Lake
5251895 m N
FAUST
HALLIDAY
JOFFRE
HOLLINGER
BISCOTASI
EDINBURGH
INVERNESS
HENNESSY
144
Biscotasing
HUBBARD
ABNEY
ELIZABETH
MARGARET
LILLIE
PAUDASH
BREBEUF
BLEWETT
IRIS
DIVANA
MARQUETTE
BAYNES
SHELLEY
FULTON
BREADNER
BATTERSBY
DUBLIN
ONAPING
5206594 m N
Onaping Lake
JASPER
ALTON
LAFLECHE
ATHLONE
MULDREW
FAIRBAIRN
383563 m E
436102 m E
0
10
20
Kilometres
LEGEND
Massive granodiorite to granite
Diorite monzonite granodiorite suite
Gneissic tonalite suite
Foliated tonalite suite
Felsic to intermediate metavolcanic rocks
Mafic to intermediate metavolcanic rocks
Mafic and ultramafic metavolcanic rocks
Mafic to ultramafic rocks
Migmatized supracrustal rocks
Coarse clastic metasedimentary rocks
Faults
Dikes
Lakes
N


Lithium in Lake Sediments
Approx %'ile
Li (ppm) ICP-MS
>98 ● >10.1
95-98 ● 8.5-10.1
90-95 ● 7.0-8.5
75-90 ● 5.1-7.0
50-75 • 3.3-5.1
<50 · <3.3
FRATER
418678 m E
SOMME
JACK
Gogama
NOBLE
TOGO
463443 m E
5282453 m N
POTTER
NE
LO
NSWICK
NEWEI
CHA
ONDONDEF
5258060 m N
463443 m E
SMUTS
INVER
VROOMAN
WESTBROOK
GARVEY
383563 m E
5251895 m N
FAUST
HA
JOFFRE
HOLLING
BISCOTASI
DEN
EDINBURGH
INVERNESS
HENNESSY
Biscotasi Lake
Biscotasi
144
HUBBARD
ABNE
ELIZABETH
MA
LILLIE
PAUDASH
BREBEUF
BLEWETT
IRIS
ELSO
CAVANA
MARQUETTE
BAYNES
SHELLEY
FULT
BREADNER
BATTERSBY
DUBLIN
ONAPING
5206594 m N
Onaping Lake
JASPER
ALTON
LAFLECHE
ATHLONE
MULDREW
FAIRBAIRN
383563 m E
436102 m E
0
10
20
Kilometres
LEGEND
Massive granodiorite to granite
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Foliated tonalite suite
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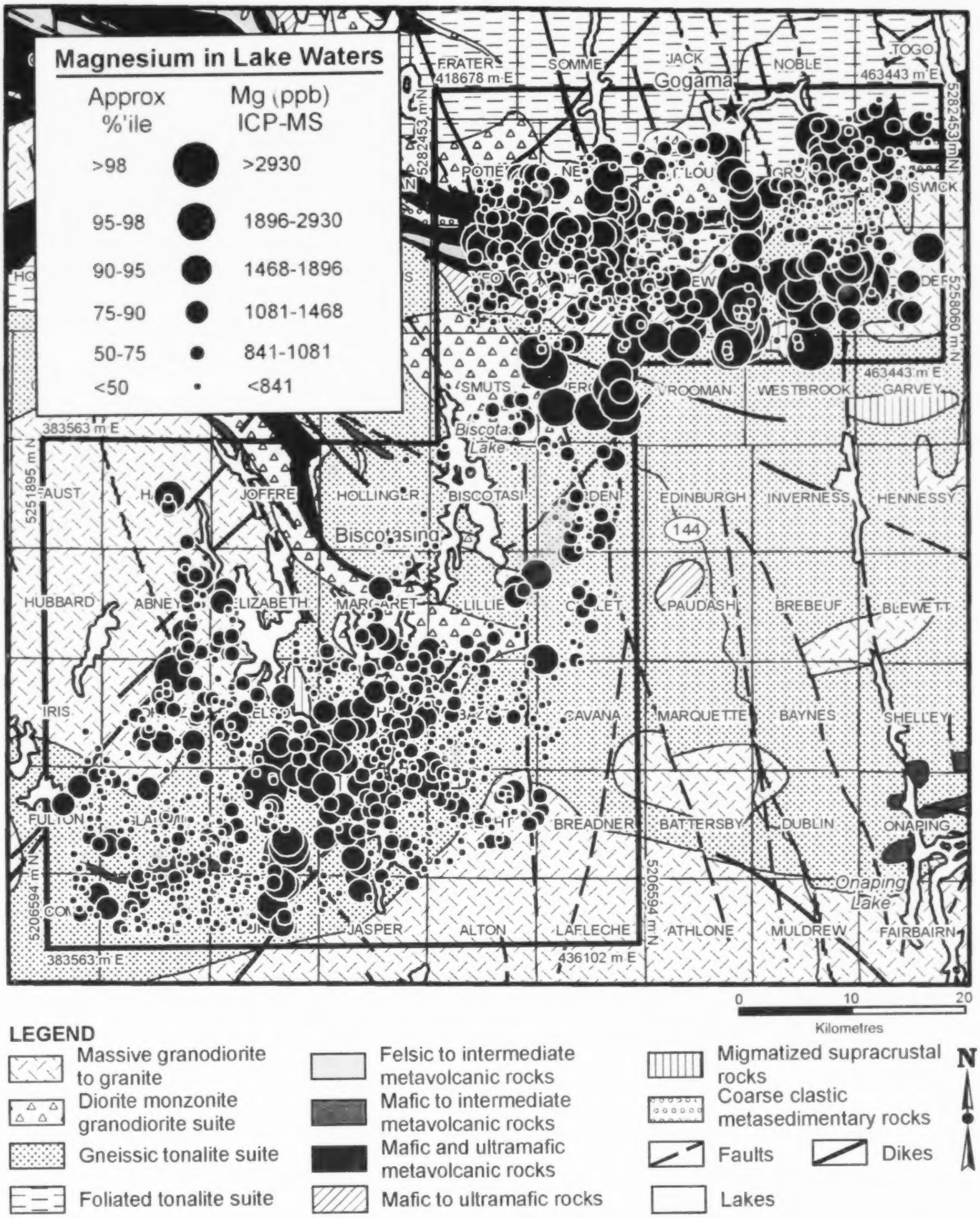
Mafic and ultramafic metavolcanic rocks
Mafic to ultramafic rocks
Migmatized supracrustal rocks
Coarse clastic metasedimentary rocks
Faults
Dikes
Lakes
N


Magnesium in Lake Waters
Approx %'ile
Mg (ppb) ICP-MS
>98 >2930
95-98 1896-2930
90-95 1468-1896
75-90 1081-1468
50-75 841-1081
<50 <841
FRATER
418678 m E
SOMME
JACK
Gogama
NOBLE
TOGO
463443 m E
5282453 m N
POTIE
LOU
SWICK
5258060 m N
463443 m E
SMUTS
VROOMAN
WESTBROOK
GARVEY
383563 m E
Biscota Lake
5251895 m N
FAUST
JOFFRE
HOLLINGER
BISCOTASI
EDINBURGH
INVERNESS
HENNESSY
144
Biscotasing
HUBBARD
ABNEY
ELIZABETH
MARGARET
LILLIE
PAUDASH
BREBEUF
BLEWETT
IRIS
CAVANA
MARQUETTE
BAYNES
SHELLEY
FULTON
BREADNER
BATTERSBY
DUBLIN
ONAPING
5206594 m N
Onaping Lake
JASPER
ALTON
LAFLECHE
ATHLONE
MULDREW
FAIRBAIRN
383563 m E
436102 m E
0 10 20
Kilometres
LEGEND
Massive granodiorite to granite
Diorite monzonite granodiorite suite
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Foliated tonalite suite
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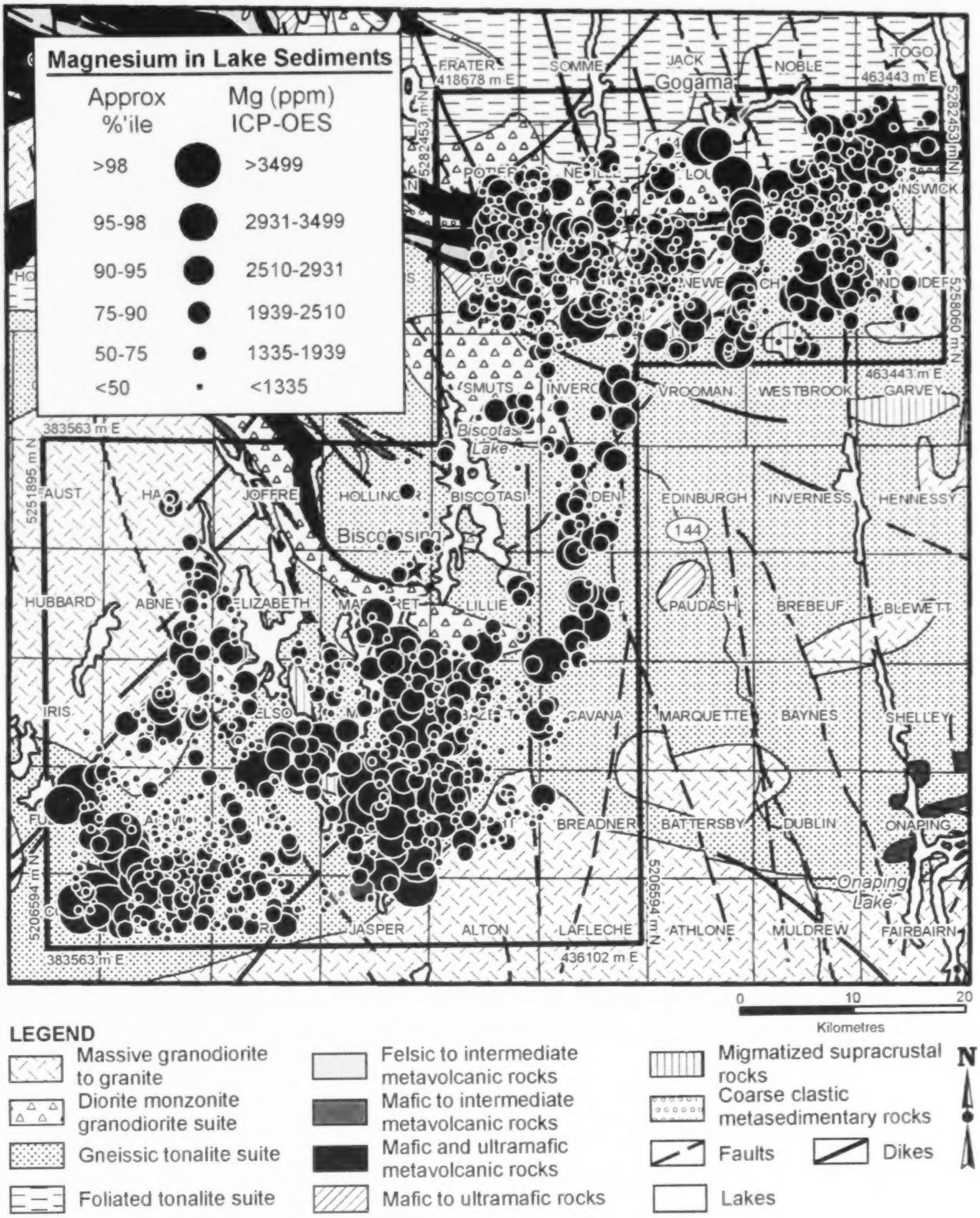
Mafic and ultramafic metavolcanic rocks
Mafic to ultramafic rocks
Migmatized supracrustal rocks
Coarse clastic metasedimentary rocks
Faults
Dikes
Lakes
N


Magnesium in Lake Sediments
Approx %'ile
Mg (ppm) ICP-OES
>98
>3499
95-98
2931-3499
90-95
2510-2931
75-90
1939-2510
50-75
1335-1939
<50
<1335
FRATER
418678 m E
SOMME
JACK
Gogama
NOBLE
TOGO
463443 m E
5282453 m N
POTTER
NEVILLE
NSWICK
NEWE
SMUTS
INVERC
VROOMAN
WESTBROOK
463443 m E
GARVEY
5258060 m N
383563 m E
Biscotasi Lake
5251895 m N
FAUST
JOFFRE
HOLLINGER
BISCOTASI
EDINBURGH
INVERNESS
HENNESSY
Biscotasing
144
HUBBARD
ABNEY
ELIZABETH
MARGARET
LILLIE
PAUDASH
BREBEUF
BLEWETT
IRIS
CAVANA
MARQUETTE
BAYNES
SHELLEY
BREADNER
BATTERSBY
DUBLIN
ONAPING
5206594 m N
Onaping Lake
JASPER
ALTON
LAFLECHE
ATHLONE
MULDREW
FAIRBAIRN
383563 m E
436102 m E
0
10
20
Kilometres
LEGEND
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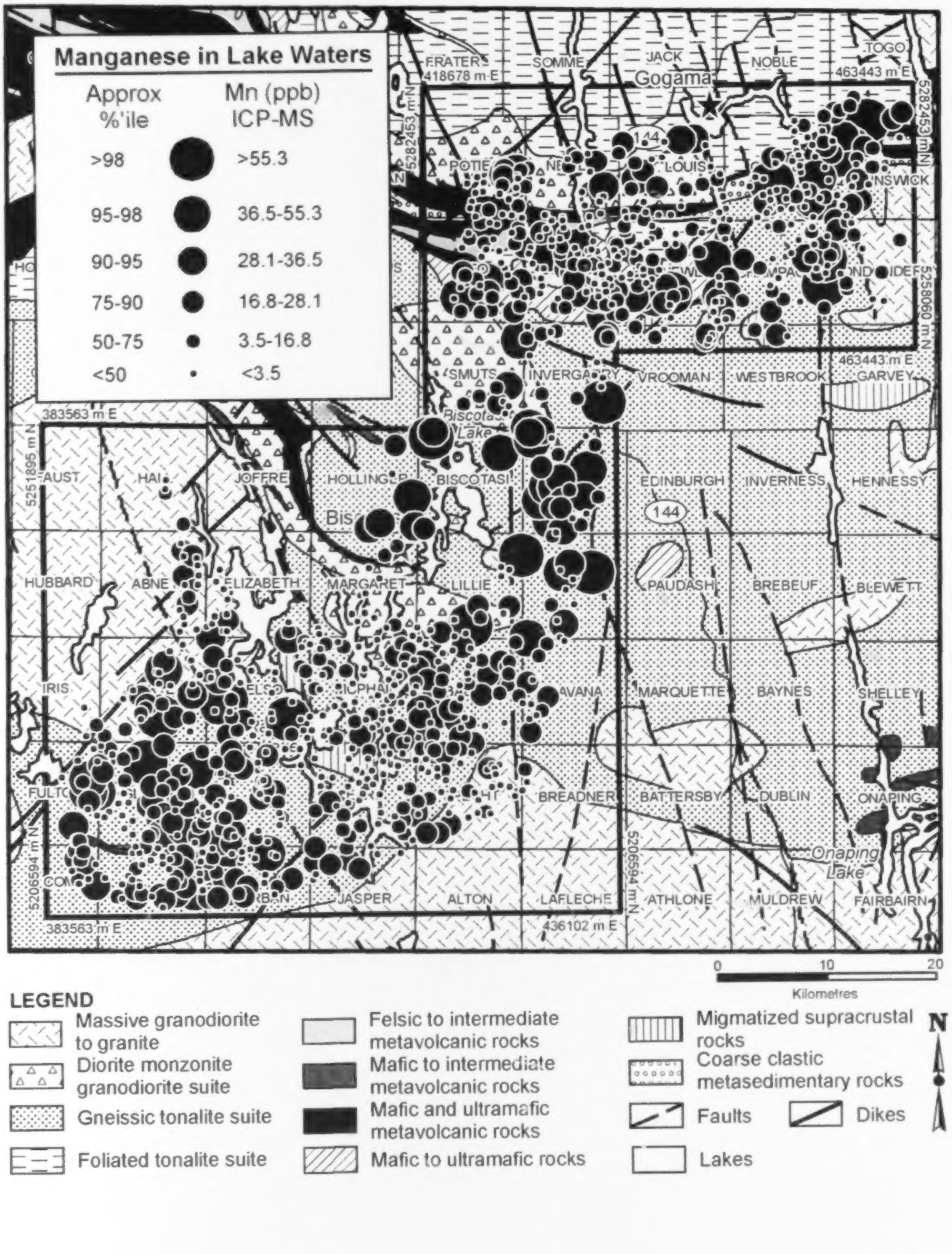
N


Manganese in Lake Waters
Approx %'ile
Mn (ppb) ICP-MS
>98 >55.3
95-98 36.5-55.3
90-95 28.1-36.5
75-90 16.8-28.1
50-75 3.5-16.8
<50 <3.5
FRATER
418678 m E
SOMME
JACK
Gogama
NOBLE
TOGO
463443 m E
5282453 m N
144
POTIE
LOUIS
NSWICK
5258060 m N
463443 m E
SMUTS
INVERGARRY
VROOMAN
WESTBROOK
GARVEY
383563 m E
5251895 m N
Biscotasi Lake
FAUST
HAI
JOFFRE
HOLLINGER
BISCOTASI
EDINBURGH
INVERNESS
HENNESSY
HUBBARD
ABNEY
ELIZABETH
MARGARET
LILLIE
PAUDASH
BREBEUF
BLEWETT
IRIS
HALSO
CHAPMAN
MARQUETTE
BAYNES
SHELLEY
FULTON
BREADNER
BATTERSBY
DUBLIN
ONAPING
Onaping Lake
5206594 m N
COMRIE
JASPER
ALTON
LAFLECHE
ATHLONE
MULDREW
FAIRBAIRN
383563 m E
436102 m E
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20
Kilometres
LEGEND
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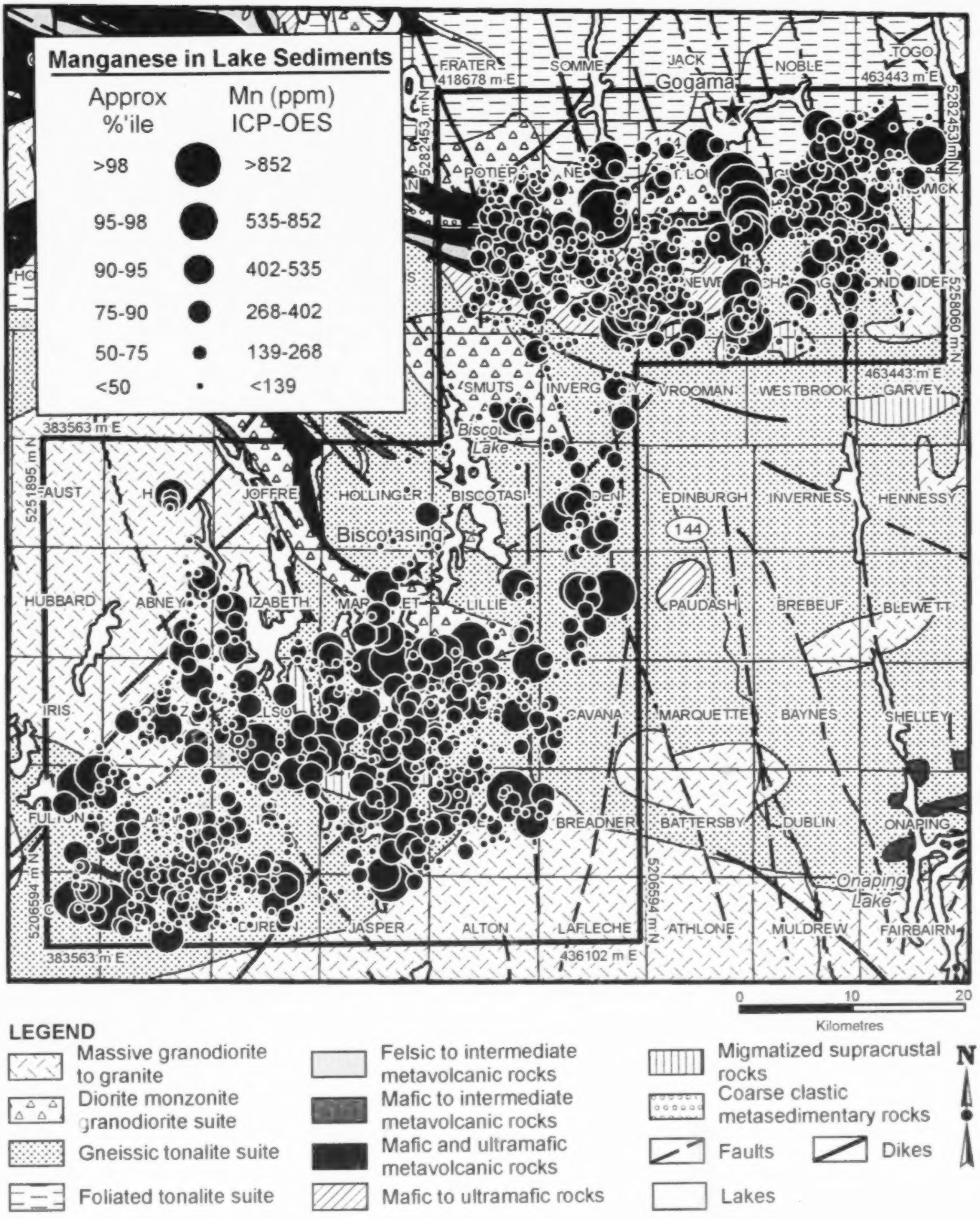
N


Manganese in Lake Sediments
Approx %'ile
Mn (ppm) ICP-OES
>98 >852
95-98 535-852
90-95 402-535
75-90 268-402
50-75 139-268
<50 <139
FRATER
418678 m E
SOMME
JACK
Gogama
NOBLE
TOGO
463443 m E
5282453 m N
POTIER
NEWTON
CHAPLEAU
CAPREOL
CHABANEL
RIDEOUT
463443 m E
5258060 m N
SMUTS
INVERGARRY
VROOMAN
WESTBROOK
GARVEY
Biscotasi Lake
383563 m E
5251895 m N
FAUST
JOFFRE
HOLLINGER
BISCOTASI
EDINBURGH
INVERNESS
HENNESSY
144
Biscotasing
HUBBARD
ABNEY
ELIZABETH
LILLIE
PAUDASH
BREBEUF
BLEWETT
IRIS
CAVANA
MARQUETTE
BAYNES
SHELLEY
FULTON
BREADNER
BATTERSBY
DUBLIN
ONAPING
Onaping Lake
5206594 m N
JASPER
ALTON
LAFLECHE
ATHLONE
MULDREW
FAIRBAIRN
383563 m E
436102 m E
0
10
20
Kilometres
LEGEND
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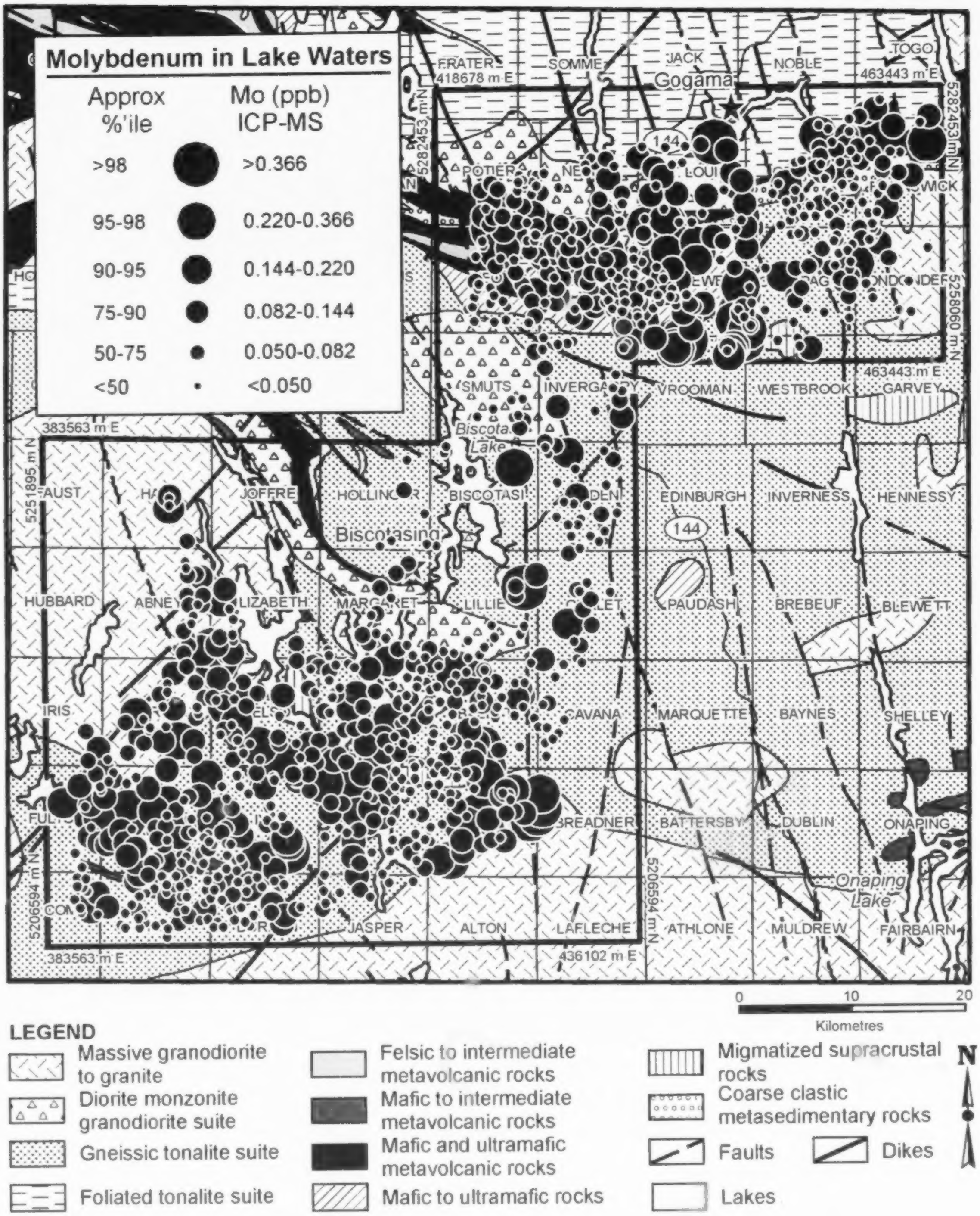
Molybdenum in Lake Waters
Approx %'ile
Mo (ppb) ICP-MS
>98 ● >0.366
95-98 ● 0.220-0.366
90-95 ● 0.144-0.220
75-90 ● 0.082-0.144
50-75 ● 0.050-0.082
<50 • <0.050
FRATER
418678 m E
SOMME
JACK
Gogama
NOBLE
TOGO
463443 m E
5282453 m N
144
POTIER
LOUI
5258060 m N
463443 m E
SMUTS
INVERGARRY
VROOMAN
WESTBROOK
GARVEY
383563 m E
Biscota Lake
5251895 m N
FAUST
JOFFRE
HOLLINGER
BISCOTASI
EDINBURGH
INVERNESS
HENNESSY
Biscotasing
HUBBARD
ABNEY
ELIZABETH
MARGARET
LILLIE
PAUDASH
BREBEUF
BLEWETT
IRIS
CAVANA
MARQUETTE
BAYNES
SHELLEY
BREADNER
BATTERSBY
DUBLIN
ONAPING
5206594 m N
Onaping Lake
JASPER
ALTON
LAFLECHE
ATHLONE
MULDREW
FAIRBAIRN
383563 m E
436102 m E
0 10 20
Kilometres
LEGEND
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Mafic and ultramafic metavolcanic rocks
Mafic to ultramafic rocks
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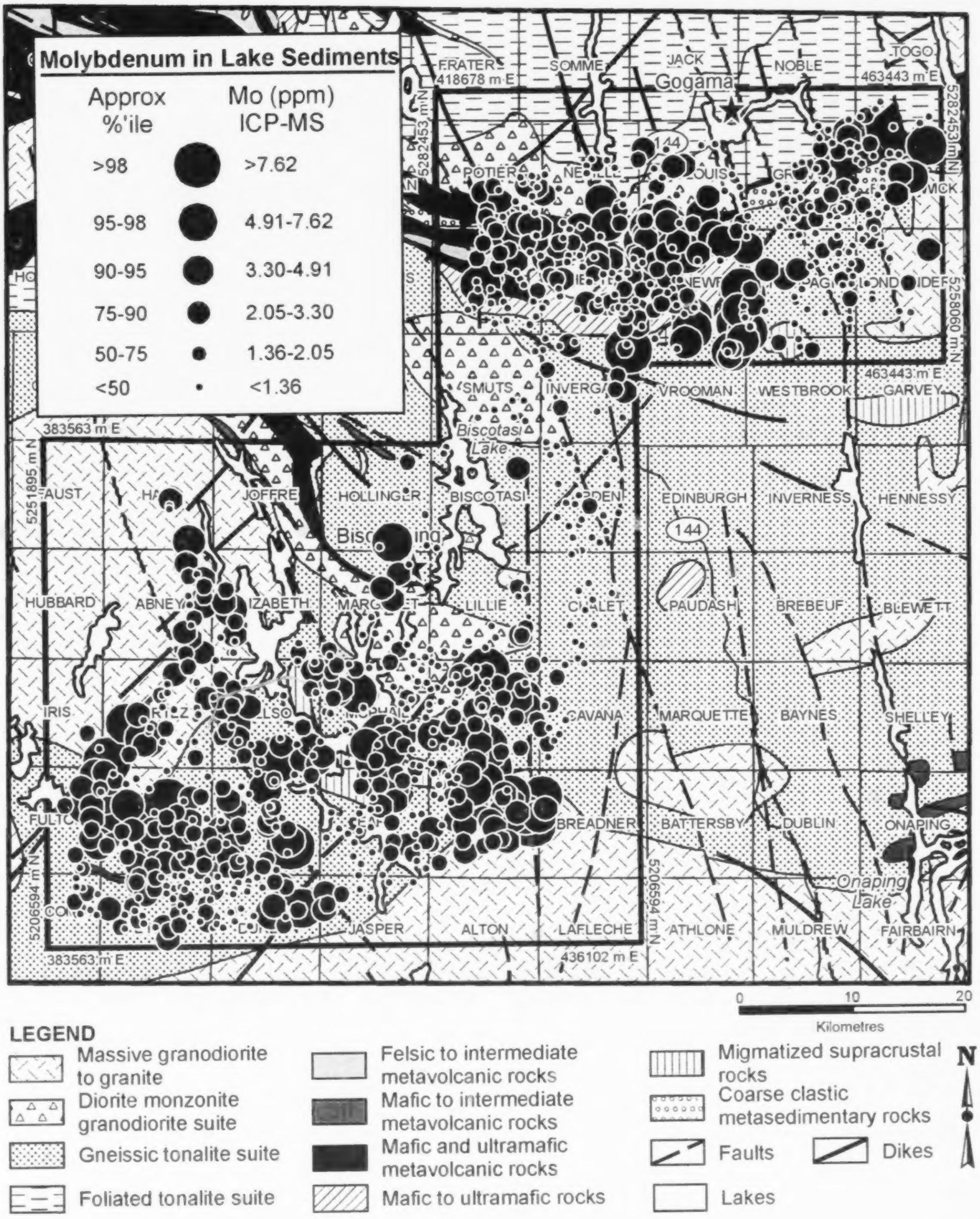
Faults
Dikes
Lakes
N


Molybdenum in Lake Sediments
Approx %'ile
Mo (ppm) ICP-MS
>98 ● >7.62
95-98 ● 4.91-7.62
90-95 ● 3.30-4.91
75-90 ● 2.05-3.30
50-75 • 1.36-2.05
<50 · <1.36
FRATER
418678 m E
SOMME
JACK
Gogama
NOBLE
TOGO
463443 m E
5282453 m N
144
POTIER
LOUIS
WICK
5258060 m N
463443 m E
SMUTS
INVERG
VROOMAN
WESTBROOK
GARVEY
Biscotasi Lake
383563 m E
5251895 m N
FAUST
JOFFRE
HOLLINGER
BISCOTASI
EDINBURGH
INVERNESS
HENNESSY
HUBBARD
ABNEY
LILLIE
PAUDASH
BREBEUF
BLEWETT
IRIS
CAVANA
MARQUETTE
BAYNES
SHELLEY
BREADNER
BATTERSBY
DUBLIN
ONAPING
Onaping Lake
5206594 m N
JASPER
ALTON
LAFLECHE
ATHLONE
MULDREW
FAIRBAIRN
383563 m E
436102 m E
0
10
20
Kilometres
LEGEND
Massive granodiorite to granite
Diorite monzonite granodiorite suite
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Mafic to intermediate metavolcanic rocks
Mafic and ultramafic metavolcanic rocks
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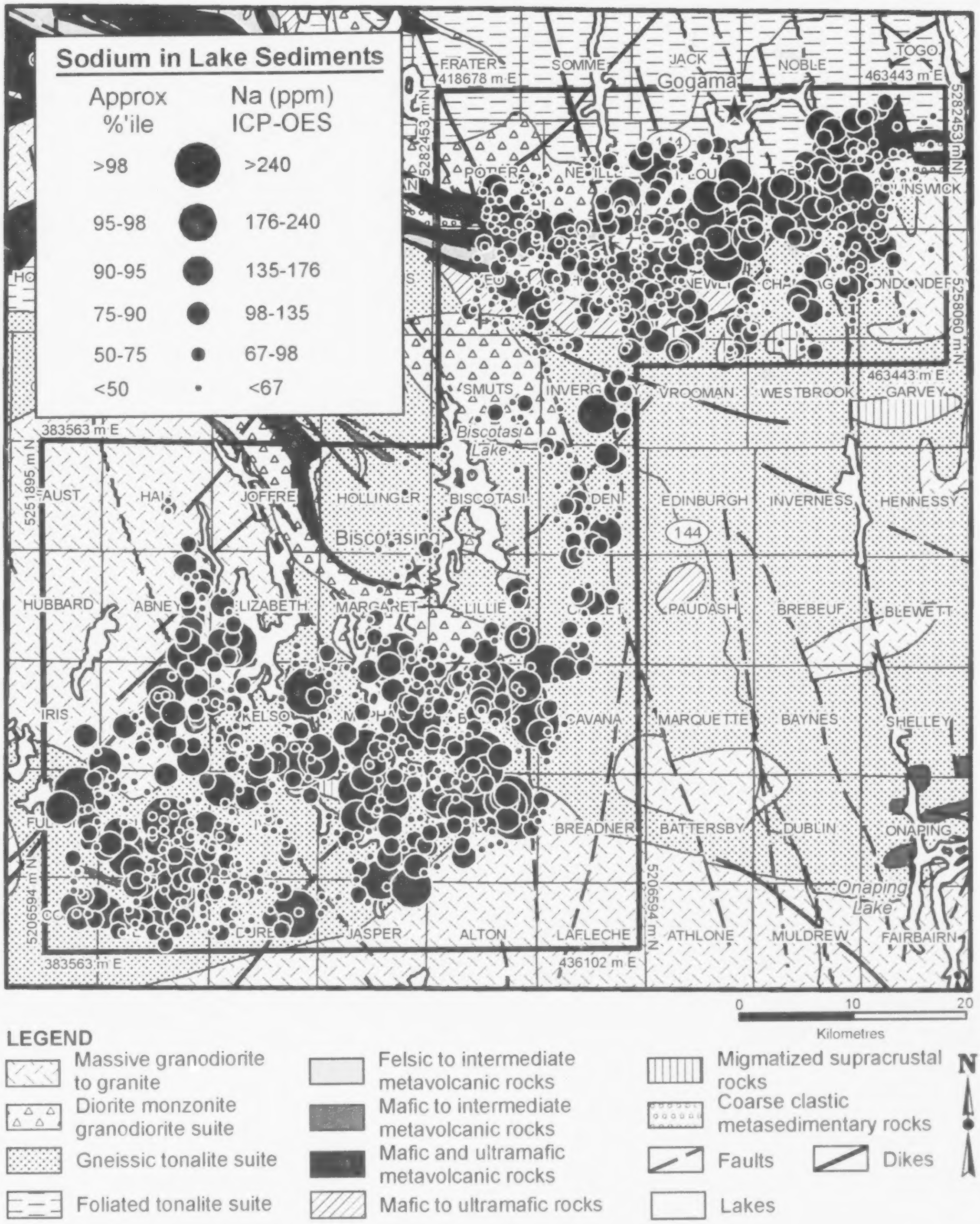
Sodium in Lake Sediments
Approx %'ile
Na (ppm) ICP-OES
>98
>240
95-98
176-240
90-95
135-176
75-90
98-135
50-75
67-98
<50
<67
FRATER
418678 m E
SOMME
JACK
Gogama
NOBLE
TOGO
463443 m E
5282453 m N
POTTER
NEVILLE
INSWICK
5258060 m N
463443 m E
GARVEY
SMUTS
INVERG
VROOMAN
WESTBROOK
383563 m E
Biscotasi Lake
5251895 m N
AUST
HALL
JOFFRE
HOLLINGER
BISCOTASI
DENI
EDINBURGH
INVERNESS
HENNESSY
144
Biscotasing
HUBBARD
ABNEY
LIZABETH
MARGARET
LILLIE
PAUDASH
BREBEUF
BLEWETT
IRIS
KELSO
CAVANA
MARQUETTE
BAYNES
SHELLEY
BREADNER
BATTERSBY
DUBLIN
ONAPING
5206594 m N
Onaping Lake
JASPER
ALTON
LAFLECHE
ATHLONE
MULDREW
FAIRBAIRN
383563 m E
436102 m E
0
10
20
Kilometres
LEGEND
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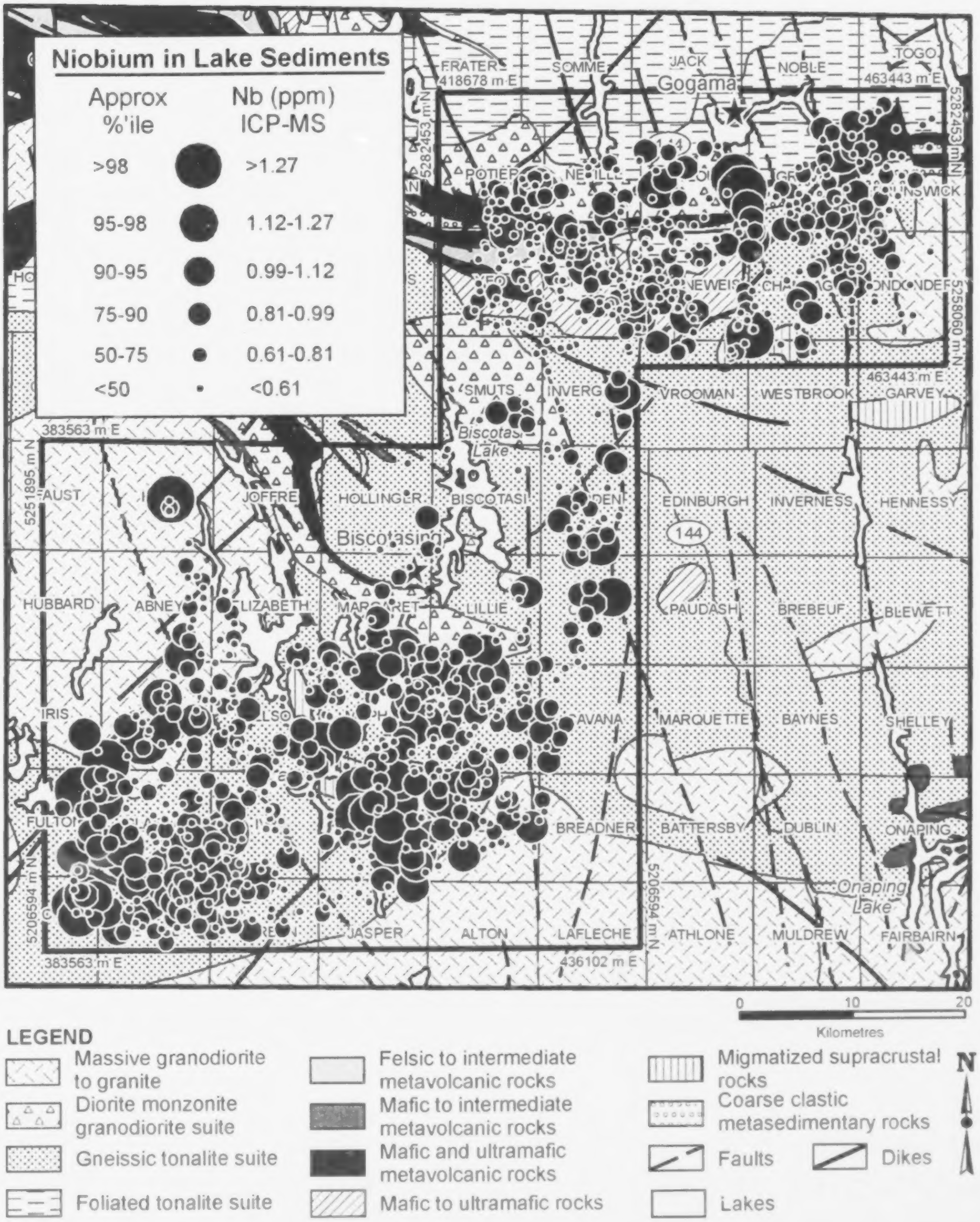
Niobium in Lake Sediments
Approx %'ile
Nb (ppm) ICP-MS
>98 ● >1.27
95-98 ● 1.12-1.27
90-95 ● 0.99-1.12
75-90 ● 0.81-0.99
50-75 ● 0.61-0.81
<50 • <0.61
FRATER
418678 m E
SOMME
JACK
Gogama
NOBLE
TOGO
463443 m E
5282453 m N
POTIER
NEVILLE
BRUNSWICK
NEWEIS
CHAPLEAU
ONDONDER
5258060 m N
463443 m E
SMUTS
INVERG
VROOMAN
WESTBROOK
GARVEY
Biscotasi Lake
383563 m E
5251895 m N
FAUST
JOFFRE
HOLLINGER
BISCOTASI
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Biscotasing
144
HUBBARD
ABNEY
ELIZABETH
MARGARET
LILLIE
PAUDASH
BREBEUF
BLEWETT
IRIS
AVANA
MARQUETTE
BAYNES
SHELLEY
FULTON
BREADNER
BATTERSBY
DUBLIN
ONAPING
Onaping Lake
5206594 m N
JASPER
ALTON
LAFLECHE
ATHLONE
MULDREW
FAIRBAIRN
383563 m E
436102 m E
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20
Kilometres
LEGEND
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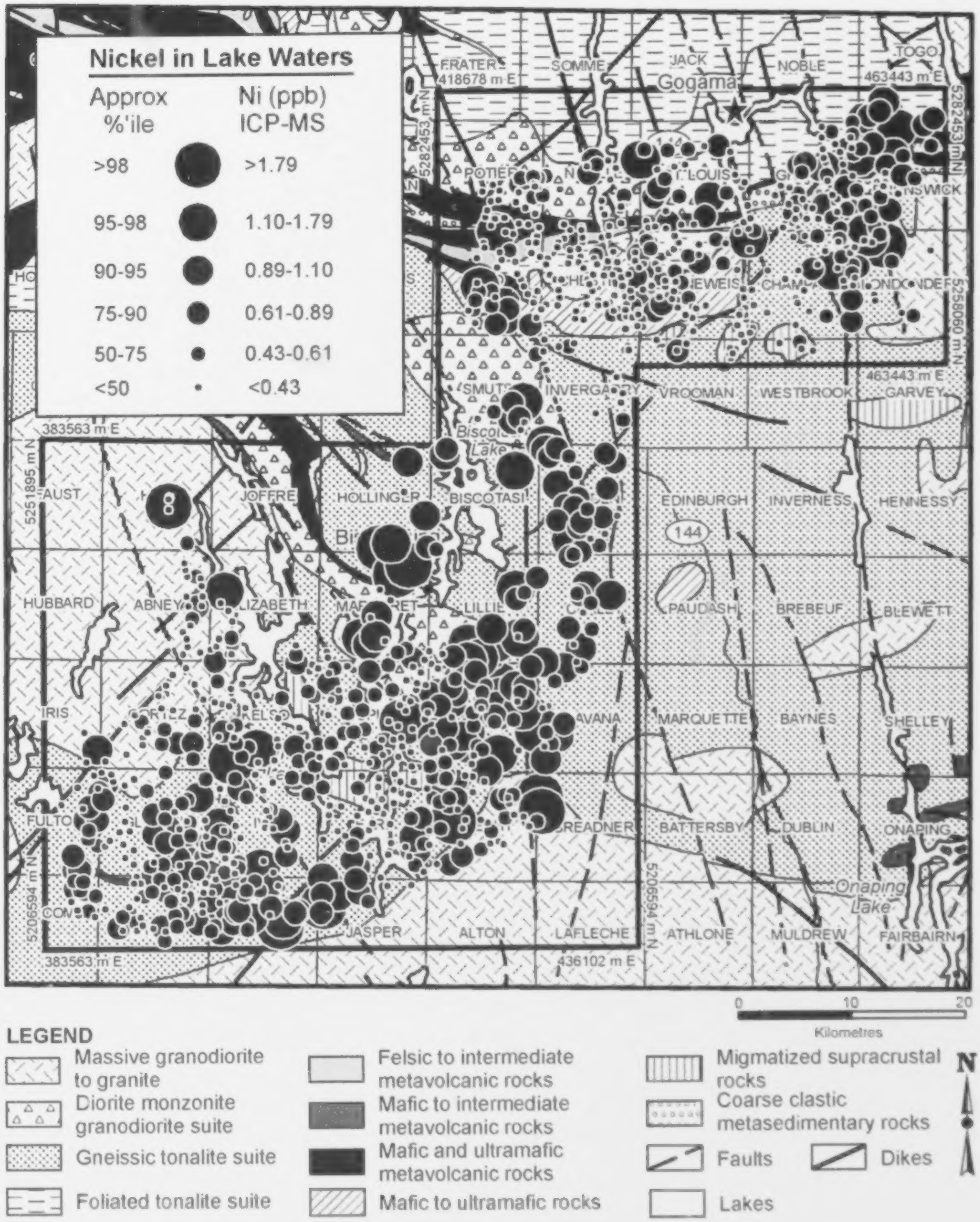

Nickel in Lake Waters
Approx %'ile
Ni (ppb) ICP-MS
>98 >1.79
95-98 1.10-1.79
90-95 0.89-1.10
75-90 0.61-0.89
50-75 0.43-0.61
<50 <0.43
FRATER
418678 m E
SOMME
JACK
NOBLE
TOGO
463443 m E
Gogama
5282453 m N
POTIER
LOUIS
NSWICK
JEWEIS
CHAM
ONDONDEF
5258060 m N
463443 m E
SMUTS
INVERGARRY
VROOMAN
WESTBROOK
GARVEY
383563 m E
Biscotasi Lake
5251895 m N
FAUST
JOFFRE
HOLLINGER
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HENNESSY
144
HUBBARD
ABNEY
ELIZABETH
MARGARET
LILLIE
PAUDASH
BREBEUF
BLEWETT
IRIS
CORTEZ
KELSO
AVANA
MARQUETTE
BAYNES
SHELLEY
FULTON
BREADNER
BATTERSBY
DUBLIN
ONAPING
Onaping Lake
5206594 m N
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JASPER
ALTON
LAFLECHE
ATHLONE
MULDREW
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436102 m E
5206594 m N
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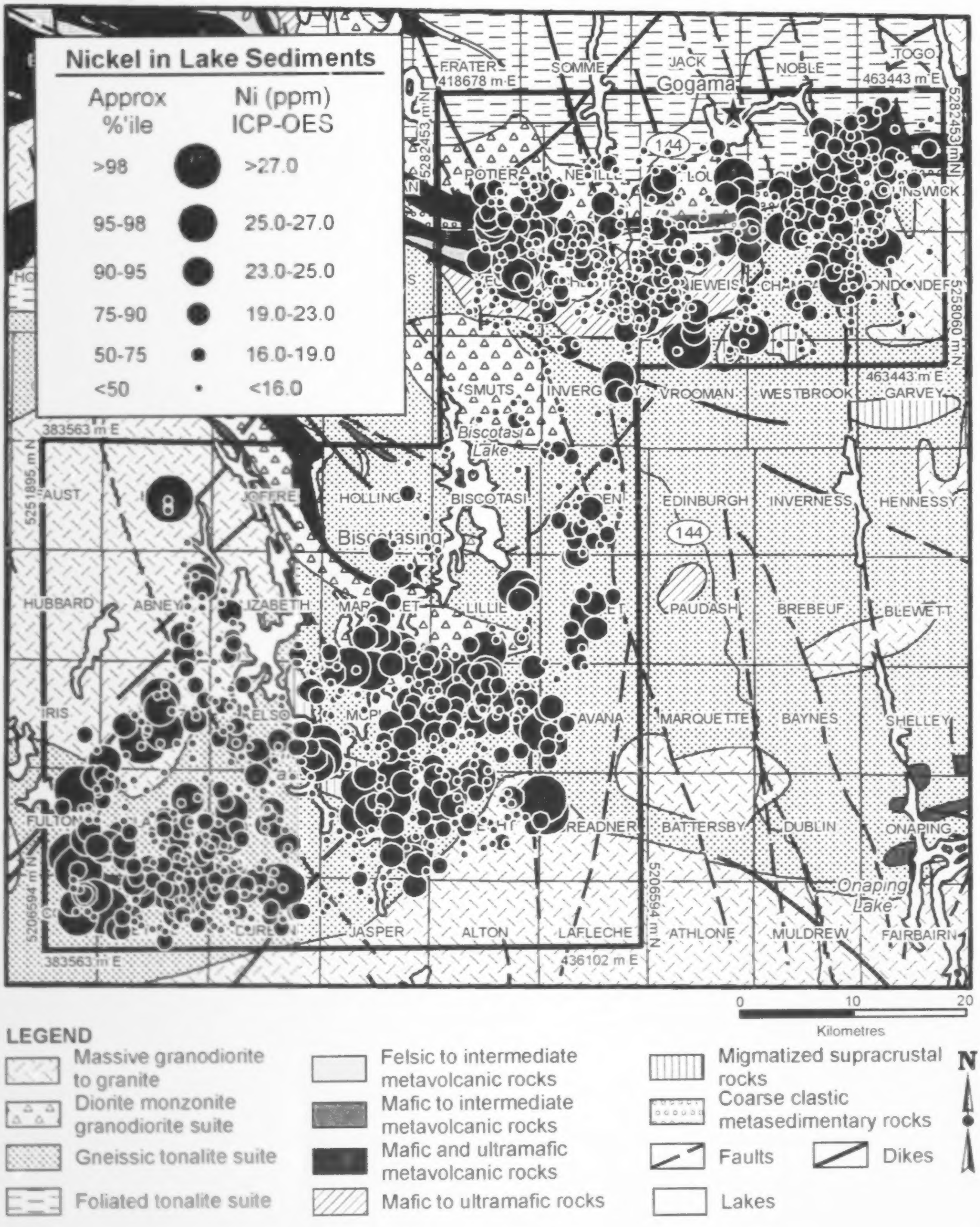
Nickel in Lake Sediments
Approx %'ile
Ni (ppm) ICP-OES
>98
>27.0
95-98
25.0-27.0
90-95
23.0-25.0
75-90
19.0-23.0
50-75
16.0-19.0
<50
<16.0
FRATER
418678 m E
SOMME
JACK
Gogama
NOBLE
TOGO
463443 m E
5282453 m N
144
POTIER
LOU
CHAMP
NSWICK
IEWEIS
ONDONDER
5258060 m N
463443 m E
SMUTS
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Biscotasi Lake
383563 m E
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Biscotasing
HUBBARD
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ELIZABETH
LILLIE
PAUDASH
BREBEUF
BLEWETT
IRIS
KELSO
AVANA
MARQUETTE
BAYNES
SHELLEY
FULTON
READNER
BATTERSBY
DUBLIN
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LAFLECHE
ATHLONE
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436102 m E
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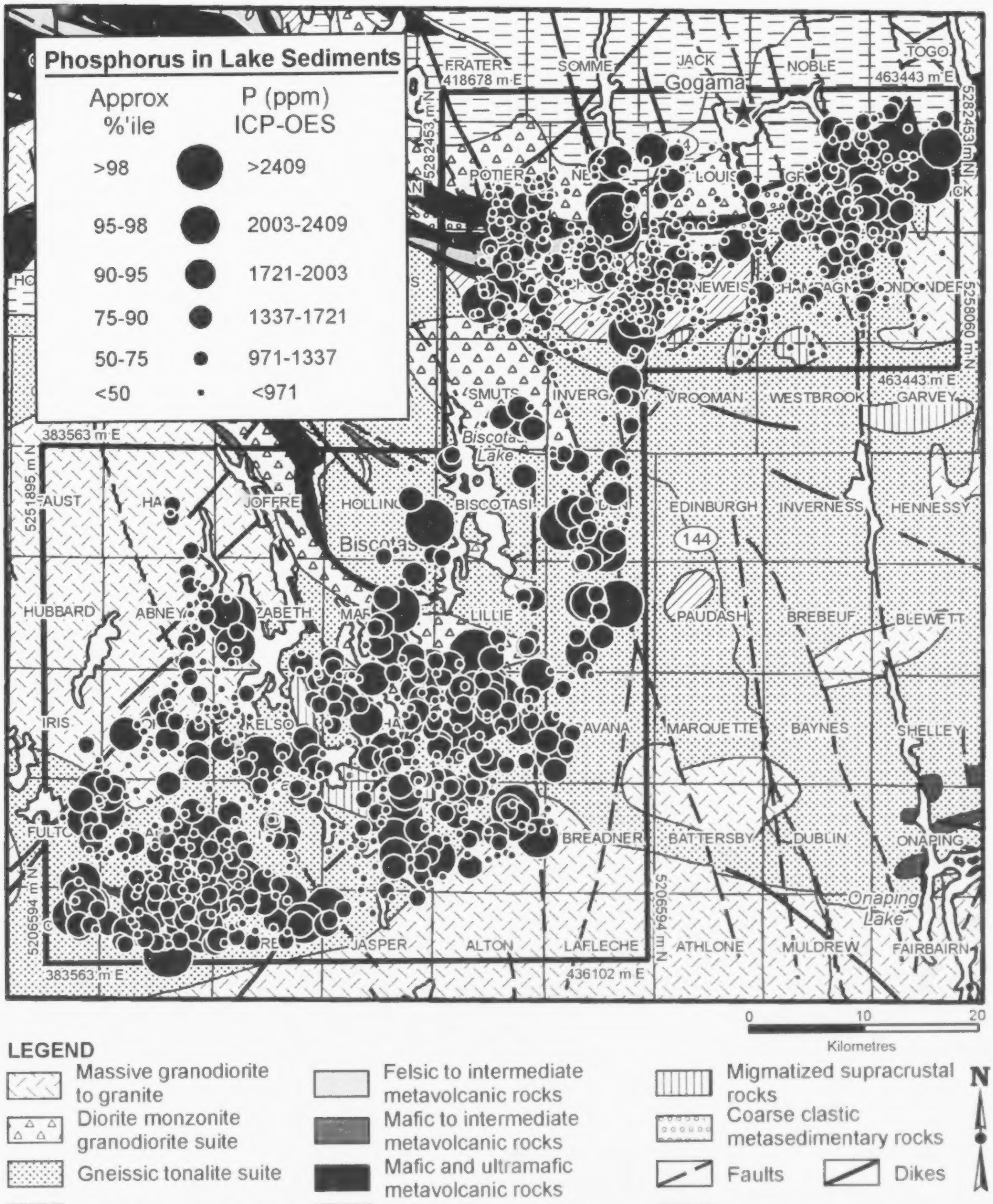
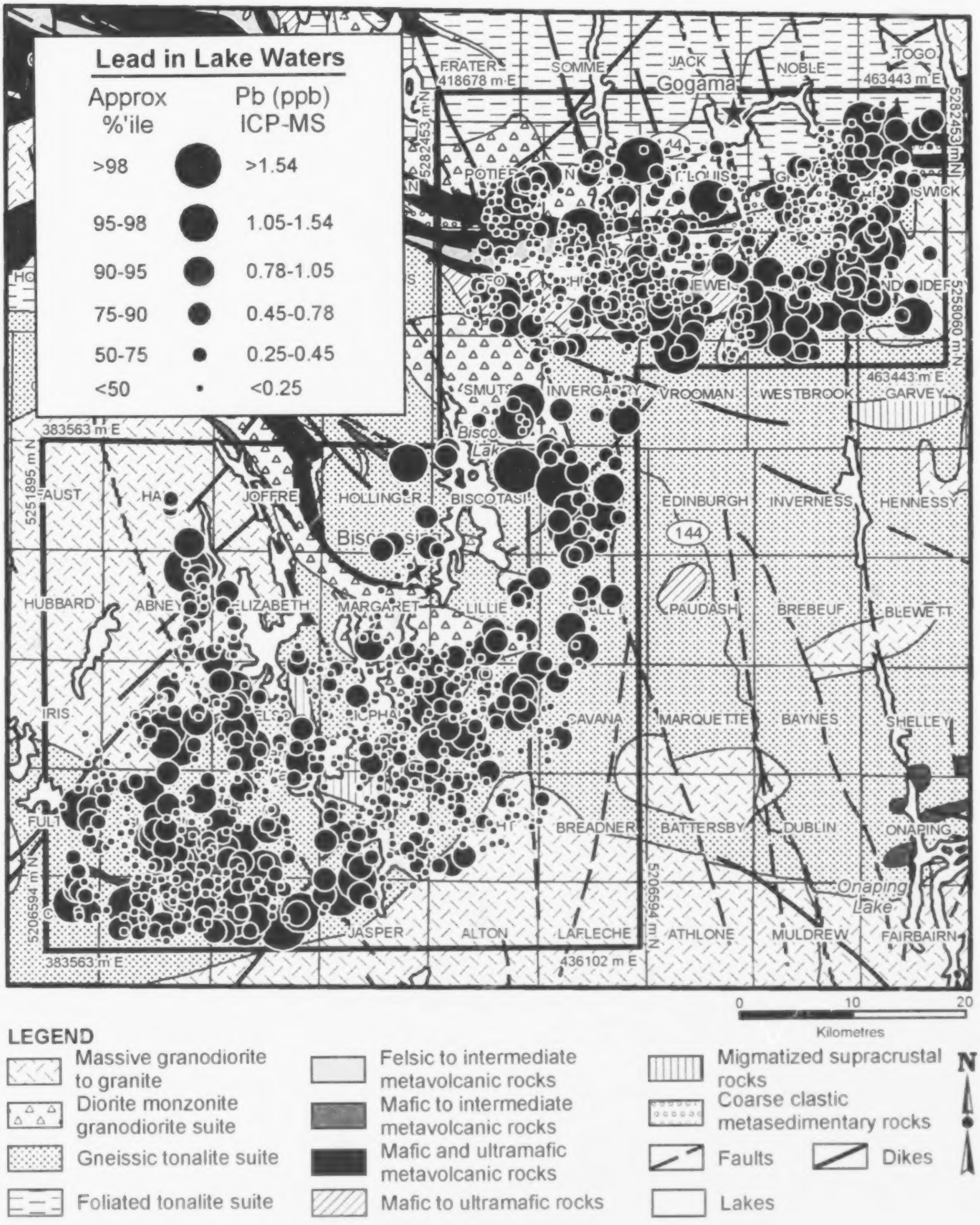
Lakes
N


Phosphorus in Lake Sediments
Approx %'ile
P (ppm) ICP-OES
>98 ● >2409
95-98 ● 2003-2409
90-95 ● 1721-2003
75-90 ● 1337-1721
50-75 ● 971-1337
<50 • <971
FRATER
418678 m E
SOMME
JACK
Gogama
NOBLE
TOGO
463443 m E
5282453 m N
POTIER
LOUIS
NEWEIS
5258060 m N
463443 m E
SMUTS
INVERGA
VROOMAN
WESTBROOK
GARVEY
Biscotasi Lake
383563 m E
5251895 m N
FAUST
JOFFRE
HOLLING
BISCOTASI
EDINBURGH
INVERNESS
HENNESSY
144
HUBBARD
ABNEY
ZABETH
LILLIE
PAUDASH
BREBEUF
BLEWETT
IRIS
KELSO
CAVANA
MARQUETTE
BAYNES
SHELLEY
FULTO
BREADNER
BATTERSBY
DUBLIN
ONAPING
5206594 m N
Onaping Lake
JASPER
ALTON
LAFLECHE
ATHLONE
MULDREW
FAIRBAIRN
383563 m E
436102 m E
0
10
20
Kilometres
LEGEND
Massive granodiorite to granite
Diorite monzonite granodiorite suite
Gneissic tonalite suite
Foliated tonalite suite
Felsic to intermediate metavolcanic rocks
Mafic to intermediate metavolcanic rocks
Mafic and ultramafic metavolcanic rocks
Mafic to ultramafic rocks
Migmatized supracrustal rocks
Coarse clastic metasedimentary rocks
Faults
Dikes
Lakes
N



Lead in Lake Waters
Approx %'ile
Pb (ppb) ICP-MS
>98 >1.54
95-98 1.05-1.54
90-95 0.78-1.05
75-90 0.45-0.78
50-75 0.25-0.45
<50 <0.25
FRATER
418678 m E
SOMME
JACK
Gogama
NOBLE
TOGO
463443 m E
5282453 m N
POTIER
ST. LOUIS
SWICK
JEWEL
5258060 m N
463443 m E
SMUTS
INVERGARRY
VROOMAN
WESTBROOK
GARVEY
383563 m E
5251895 m N
FAUST
JOFFRE
HOLLINGER
BISCOTASI
EDINBURGH
INVERNESS
HENNESSY
144
HUBBARD
ABNEY
LIZABETH
MARGARET
LILLIE
PAUDASH
BREBEUF
BLEWETT
IRIS
CAVANA
MARQUETTE
BAYNES
SHELLEY
BREADNER
BATTERSBY
DUBLIN
ONAPING
5206594 m N
Onaping Lake
JASPER
ALTON
LAFLECHE
ATHLONE
MULDREW
FAIRBAIRN
383563 m E
436102 m E
0
10
20
Kilometres
LEGEND
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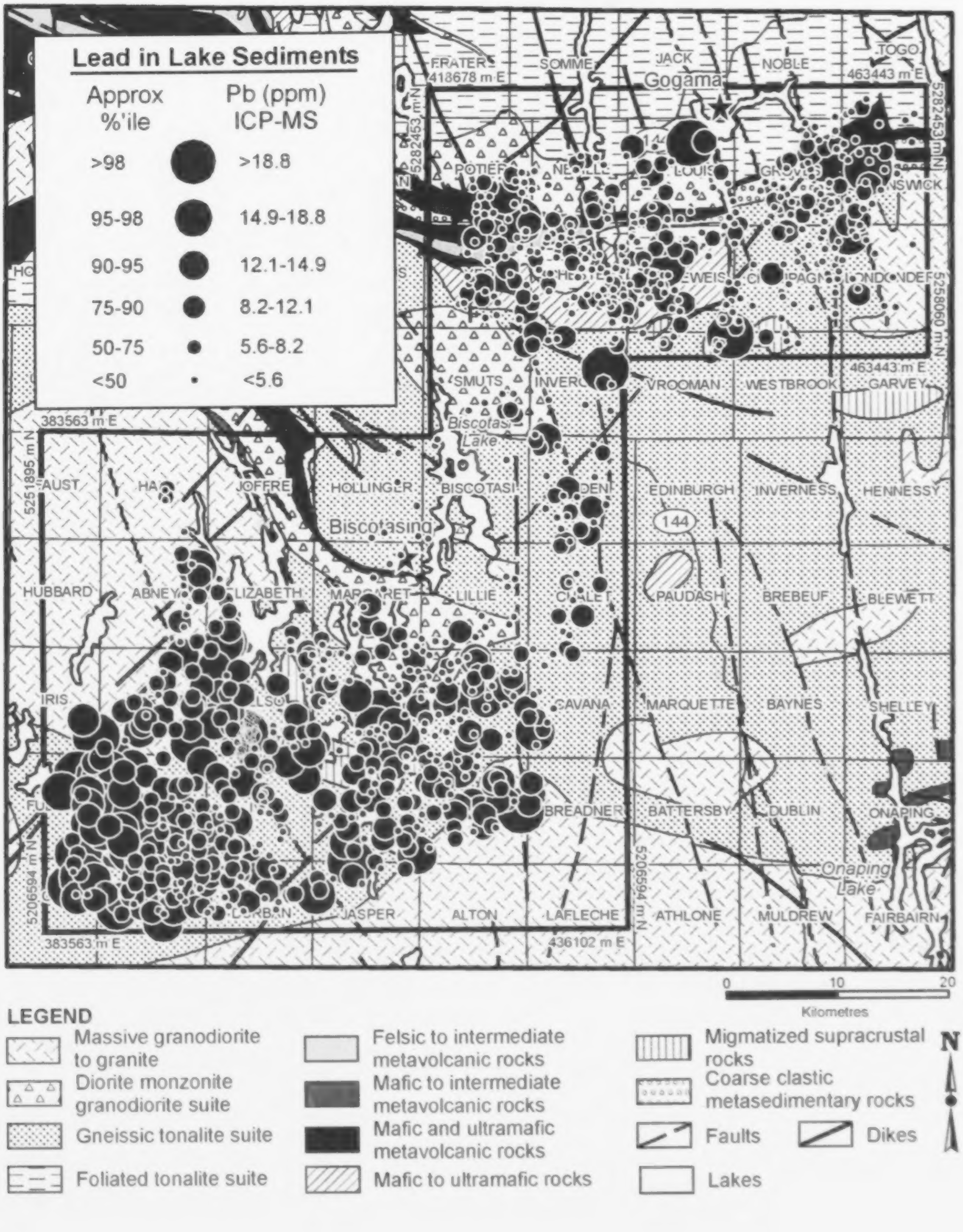
Mafic and ultramafic metavolcanic rocks
Mafic to ultramafic rocks
Migmatized supracrustal rocks
Coarse clastic metasedimentary rocks
Faults
Dikes
Lakes
N


Lead in Lake Sediments
Approx %'ile
Pb (ppm) ICP-MS
>98 ● >18.8
95-98 ● 14.9-18.8
90-95 ● 12.1-14.9
75-90 ● 8.2-12.1
50-75 ● 5.6-8.2
<50 • <5.6
FRATER
418678 m E
SOMME
JACK
Gogama
NOBLE
TOGO
463443 m E
5282453 m N
POTIER
LOUIS
NSWICK
EWEIS
LONDONDERRY
5258060 m N
463443 m E
SMUTS
VROOMAN
WESTBROOK
GARVEY
383563 m E
Biscotasi Lake
5251895 m N
FAUST
JOFFRE
HOLLINGER
BISCOTASI
EDINBURGH
INVERNESS
HENNESSY
144
Biscotasing
HUBBARD
ABNEY
ELIZABETH
LILLIE
CHALET
PAUDASH
BREBEUF
BLEWETT
IRIS
CAVANA
MARQUETTE
BAYNES
SHELLEY
BREADNER
BATTERSBY
DUBLIN
ONAPING
5206594 m N
Onaping Lake
JASPER
ALTON
LAFLECHE
ATHLONE
MULDREW
FAIRBAIRN
383563 m E
436102 m E
0
10
20
Kilometres
LEGEND
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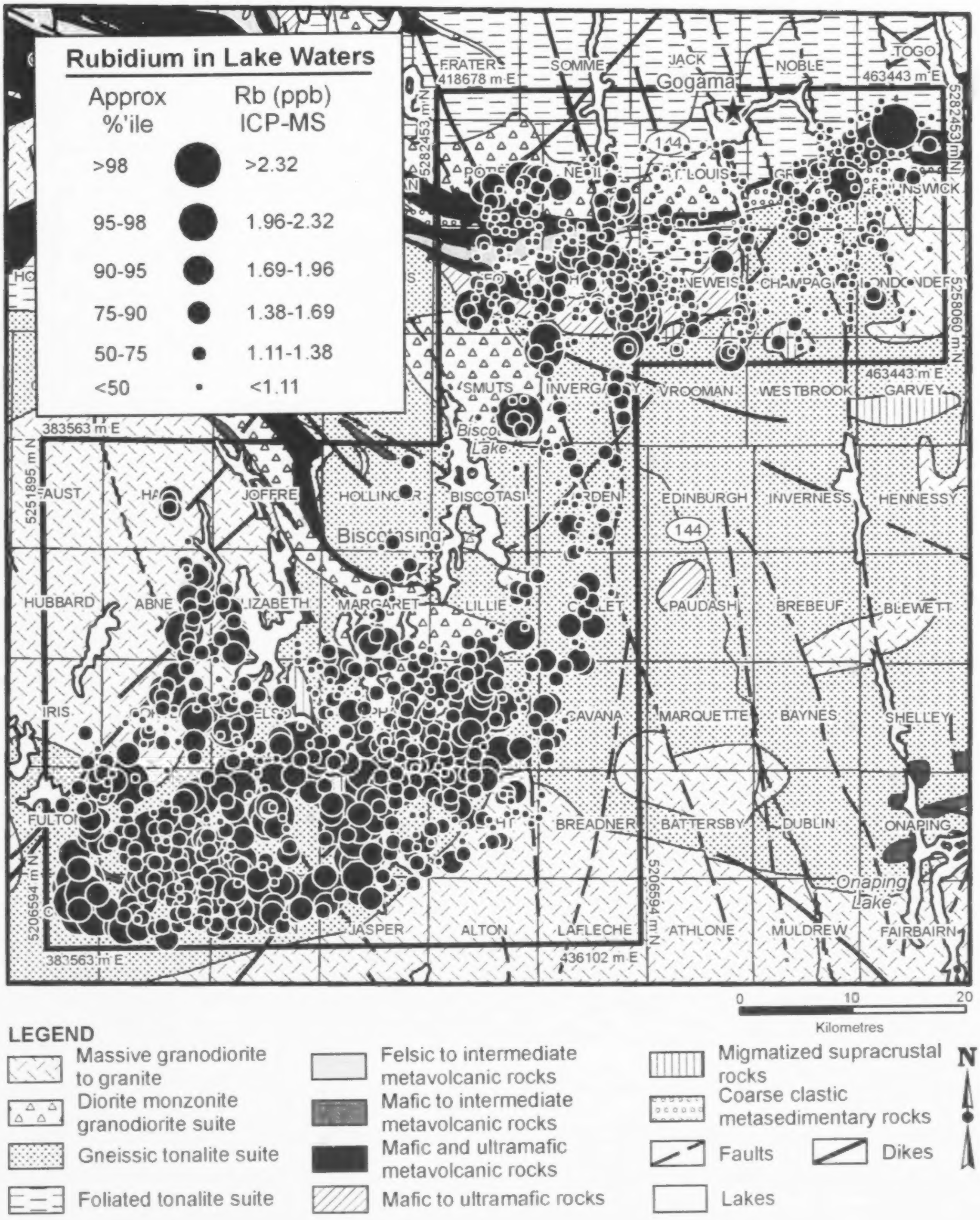
Migmatized supracrustal rocks
Coarse clastic metasedimentary rocks
Faults
Dikes
Lakes
N


Rubidium in Lake Waters
Approx %'ile
Rb (ppb) ICP-MS
>98 ● >2.32
95-98 ● 1.96-2.32
90-95 ● 1.69-1.96
75-90 ● 1.38-1.69
50-75 • 1.11-1.38
<50 • <1.11
FRATER
418678 m E
SOMME
JACK
Gogama
NOBLE
TOGO
463443 m E
5282453 m N
144
ST. LOUIS
NEWEIS
CHAMPAGNE
ONDONDEF
5258060 m N
SMUTS
INVERGARRY
VROOMAN
WESTBROOK
GARVEY
463443 m E
Biscotasi Lake
383563 m E
5251895 m N
FAUST
JOFFRE
HOLLINGER
BISCOTASI
EDINBURGH
INVERNESS
HENNESSY
Biscotasing
HUBBARD
ABNEY
ELIZABETH
MARGARET
LILLIE
PAUDASH
BREBEUF
BLEWETT
IRIS
CAVANA
MARQUETTE
BAYNES
SHELLEY
FULTON
BREADNER
BATTERSBY
DUBLIN
ONAPING
Onaping Lake
5206594 m N
JASPER
ALTON
LAFLECHE
ATHLONE
MULDREW
FAIRBAIRN
383563 m E
436102 m E
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20
Kilometres
LEGEND
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Migmatized supracrustal rocks
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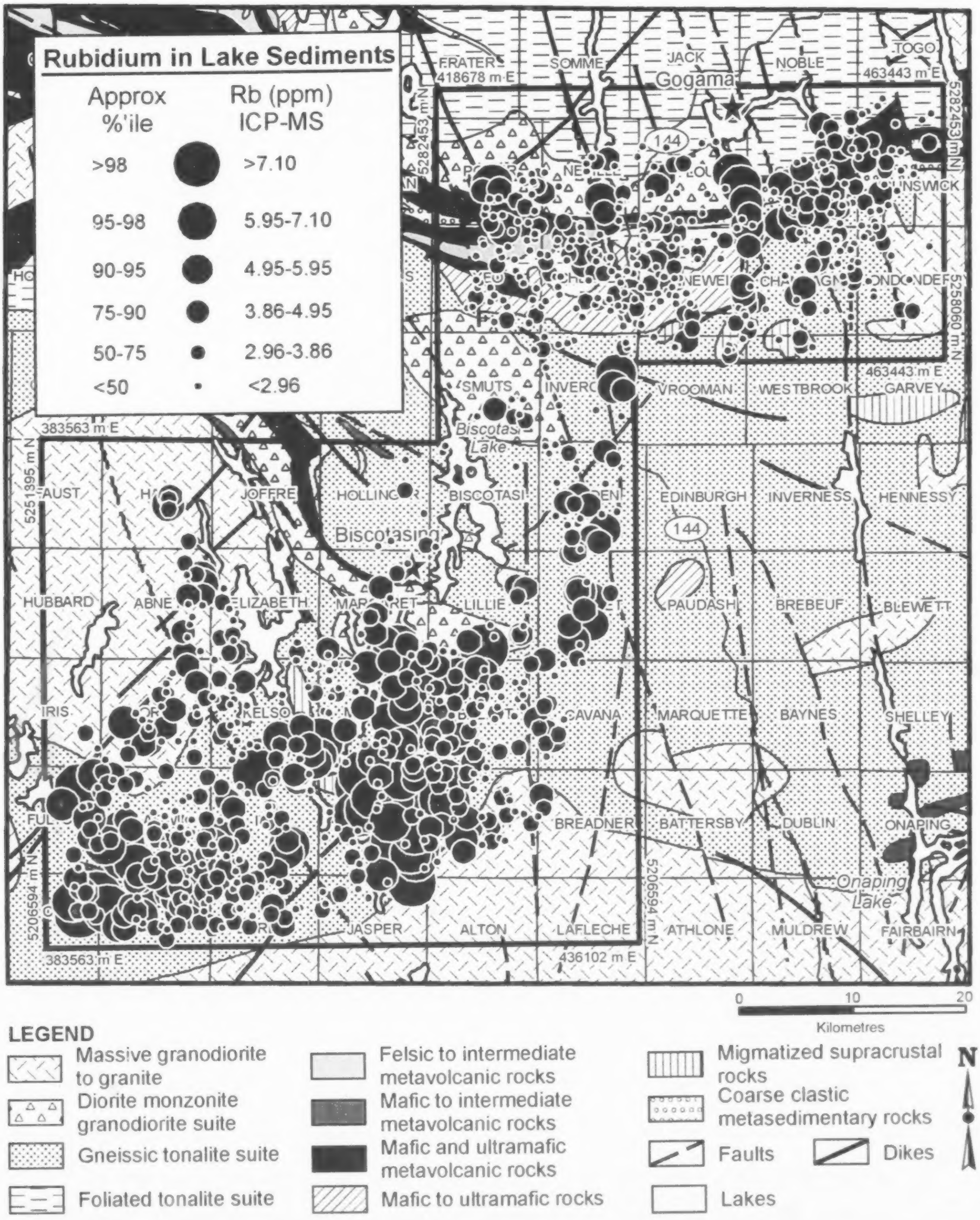
Faults
Dikes
Lakes
N


Rubidium in Lake Sediments
Approx %'ile
Rb (ppm) ICP-MS
>98 ● >7.10
95-98 ● 5.95-7.10
90-95 ● 4.95-5.95
75-90 ● 3.86-4.95
50-75 • 2.96-3.86
<50 · <2.96
FRATER
SOMME
JACK
NOBLE
TOGO
Gogama
418678 m E
463443 m E
5282453 m N
144
BRUNSWICK
NEWELL
CHAMPAGNE
LONDONDERRY
5258060 m N
SMUTS
INVERCLOSE
VROOMAN
WESTBROOK
GARVEY
463443 m E
383563 m E
5251395 m N
Biscotasi Lake
FAUST
JOFFRE
HOLLINGER
BISCOTASI
EDINBURGH
INVERNESS
HENNESSY
Biscotasing
HUBBARD
ABNEY
ELIZABETH
MARGARET
LILLIE
PAUDASH
BREBEUF
BLEWETT
IRIS
KELSO
CAVANA
MARQUETTE
BAYNES
SHELLEY
BREADNER
BATTERSBY
DUBLIN
ONAPING
5206594 m N
Onaping Lake
JASPER
ALTON
LAFLECHE
ATHLONE
MULDREW
FAIRBAIRN
383563 m E
436102 m E
0
10
20
Kilometres
LEGEND
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Mafic to ultramafic rocks
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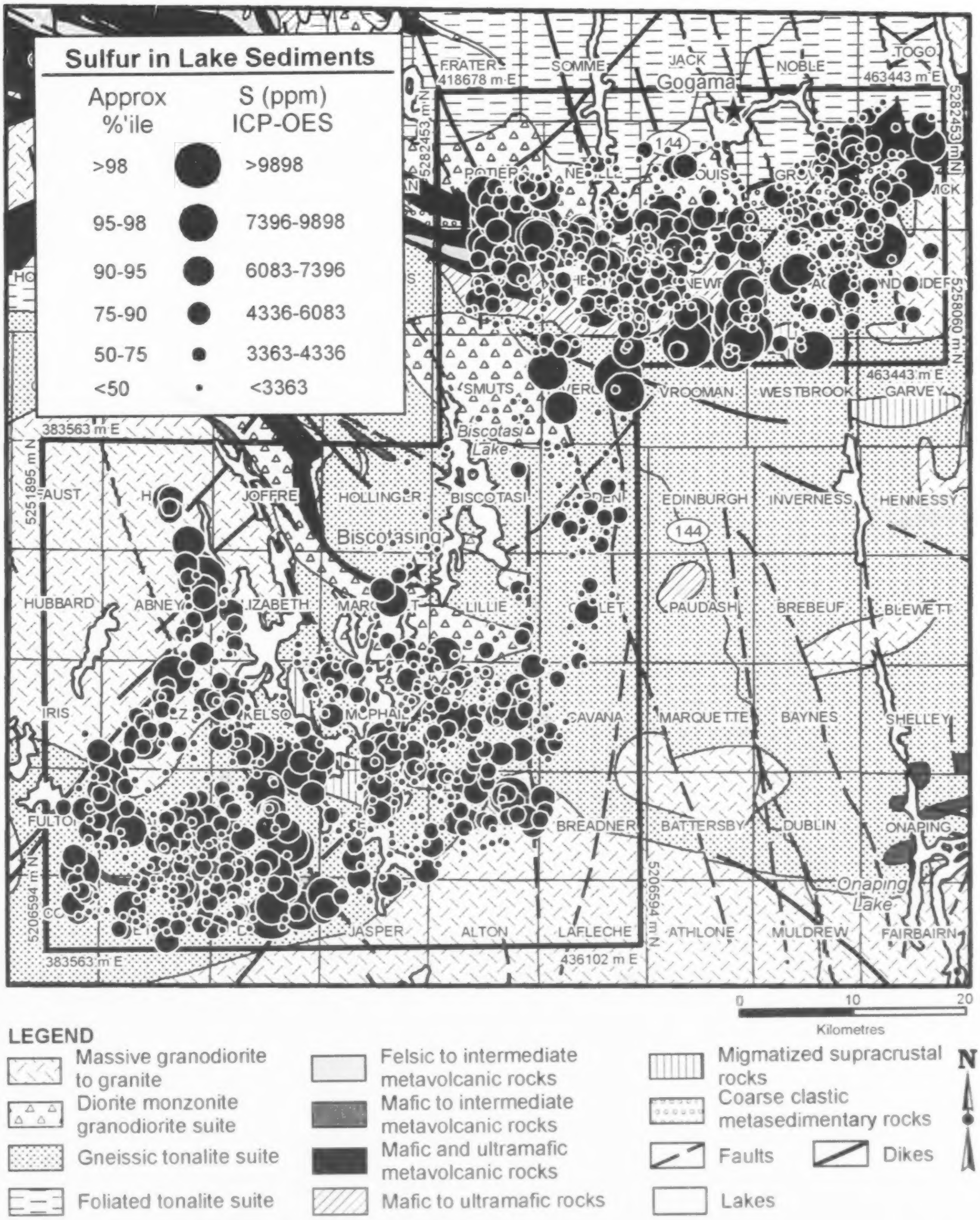
Coarse clastic metasedimentary rocks
Faults
Dikes
Lakes
N



Sulfur in Lake Sediments
Approx %'ile
S (ppm) ICP-OES
>98
>9898
95-98
7396-9898
90-95
6083-7396
75-90
4336-6083
50-75
3363-4336
<50
<3363
FRATER
418678 m E
SOMME
JACK
Gogama
NOBLE
TOGO
463443 m E
5282453 m N
144
POTIER
LOUIS
SMUTS
VROOMAN
WESTBROOK
GARVEY
463443 m E
5258060 m N
383563 m E
Biscotasi Lake
5251895 m N
FAUST
JOFFRE
HOLLINGER
BISCOTASI
EDINBURGH
INVERNESS
HENNESSY
Biscotasing
HUBBARD
ABNEY
LIZABETH
LILLIE
PAUDASH
BREBEUF
BLEWETT
IRIS
KELSO
MCPHAIL
CAVANA
MARQUETTE
BAYNES
SHELLEY
BREADNER
BATTERSBY
DUBLIN
ONAPING
Onaping Lake
5206594 m N
JASPER
ALTON
LAFLECHE
ATHLONE
MULDREW
FAIRBAIRN
383563 m E
436102 m E
0
10
20
Kilometres
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Migmatized supracrustal rocks
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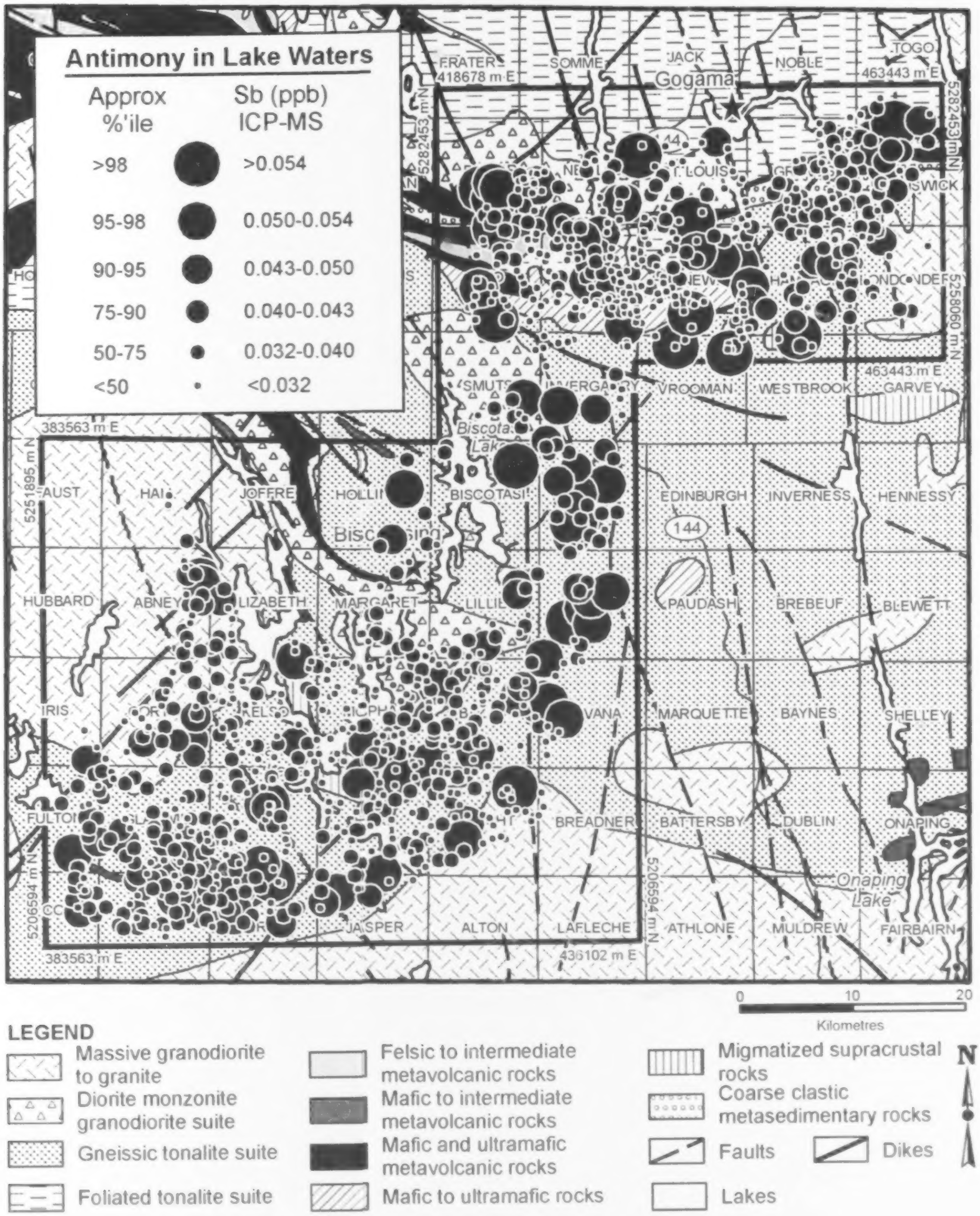
Dikes
Lakes
N


Antimony in Lake Waters
Approx %'ile
Sb (ppb) ICP-MS
>98 >0.054
95-98 0.050-0.054
90-95 0.043-0.050
75-90 0.040-0.043
50-75 0.032-0.040
<50 <0.032
FRATER
418678 m E
SOMME
JACK
NOBLE
TOGO
463443 m E
Gogama
5282453 m N
ST. LOUIS
GRENVICK
5258060 m N
463443 m E
SMUTS
INVERGARRY
VROOMAN
WESTBROOK
GARVEY
383563 m E
Biscotasi Lake
5251895 m N
FAUST
HALL
JOFFRE
HOLLINGER
BISCOTASI
EDINBURGH
INVERNESS
HENNESSY
144
Biscotasing
HUBBARD
ABNEY
ELIZABETH
MARGARET
LILLIE
PAUDASH
BREBEUF
BLEWETT
IRIS
VANA
MARQUETTE
BAYNES
SHELLEY
FULTON
BREADNER
BATTERSBY
DUBLIN
ONAPING
5206594 m N
Onaping Lake
JASPER
ALTON
LAFLECHE
ATHLONE
MULDREW
FAIRBAIRN
383563 m E
436102 m E
0
10
20
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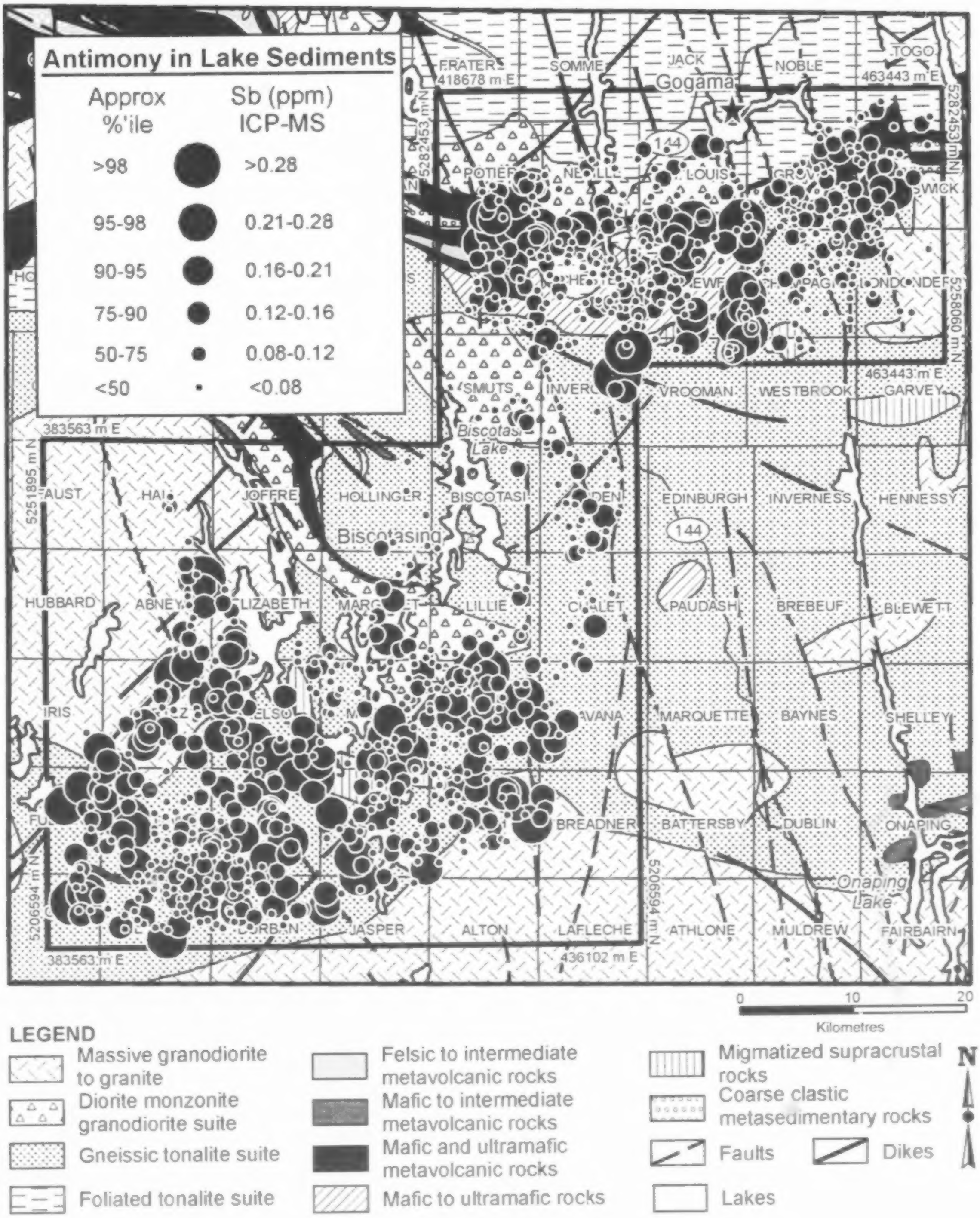
N


Antimony in Lake Sediments
Approx %'ile
Sb (ppm) ICP-MS
>98 >0.28
95-98 0.21-0.28
90-95 0.16-0.21
75-90 0.12-0.16
50-75 0.08-0.12
<50 <0.08
FRATER
418678 m E
SOMME
JACK
Gogama
NOBLE
TOGO
463443 m E
5282453 m N
POTIER
LOUIS
SWICK
LONDONDERRY
5258060 m N
SMUTS
VROOMAN
WESTBROOK
463443 m E
GARVEY
383563 m E
5251895 m N
Biscotasi Lake
FAUST
JOFFRE
HOLLINGER
BISCOTASI
EDINBURGH
INVERNESS
HENNESSY
144
Biscotasing
HUBBARD
ABNEY
ELIZABETH
LILLIE
CHALET
PAUDASH
BREBEUF
BLEWETT
IRIS
MARQUETTE
BAYNES
SHELLEY
BREADNER
BATTERSBY
DUBLIN
ONAPING
Onaping Lake
5206594 m N
JASPER
ALTON
LAFLECHE
ATHLONE
MULDREW
FAIRBAIRN
383563 m E
436102 m E
0
10
20
Kilometres
LEGEND
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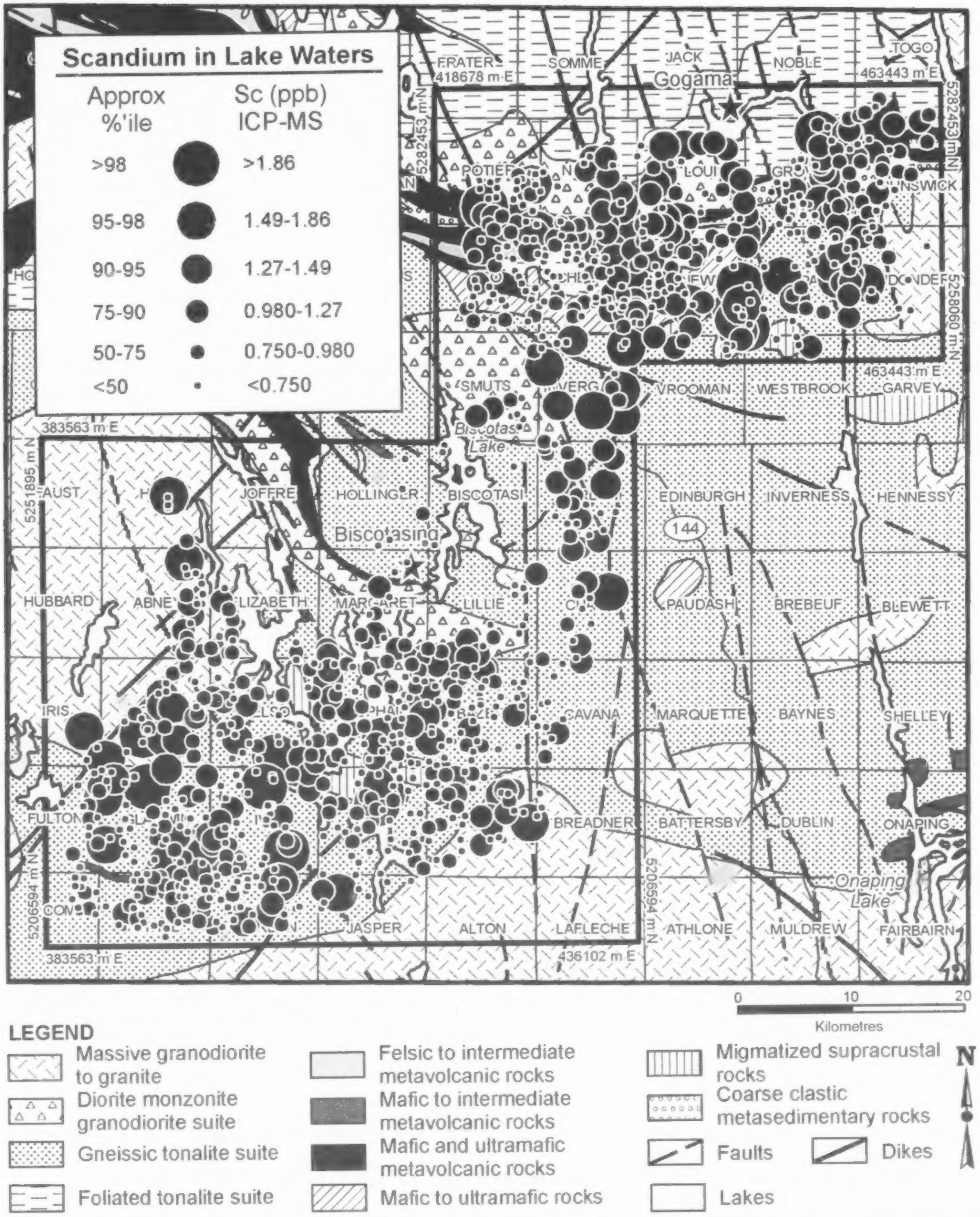
Scandium in Lake Waters
Approx %'ile
Sc (ppb) ICP-MS
>98
>1.86
95-98
1.49-1.86
90-95
1.27-1.49
75-90
0.980-1.27
50-75
0.750-0.980
<50
<0.750
FRATER
418678 m E
SOMME
JACK
Gogama
NOBLE
TOGO
463443 m E
5282453 m N
POTIER
LOUI
NSWICK
DONDEF
5258060 m N
463443 m E
SMUTS
VROOMAN
WESTBROOK
GARVEY
383563 m E
Biscotasi Lake
5251895 m N
FAUST
JOFFRE
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BISCOTASI
EDINBURGH
INVERNESS
HENNESSY
144
Biscotasing
HUBBARD
ABNEY
ELIZABETH
MARGARET
LILLIE
PAUDASH
BREBEUF
BLEWETT
IRIS
CAVANA
MARQUETTE
BAYNES
SHELLEY
FULTON
BREADNER
BATTERSBY
DUBLIN
ONAPING
5206594 m N
Onaping Lake
JASPER
ALTON
LAFLECHE
ATHLONE
MULDREW
FAIRBAIRN
383563 m E
436102 m E
0
10
20
Kilometres
LEGEND
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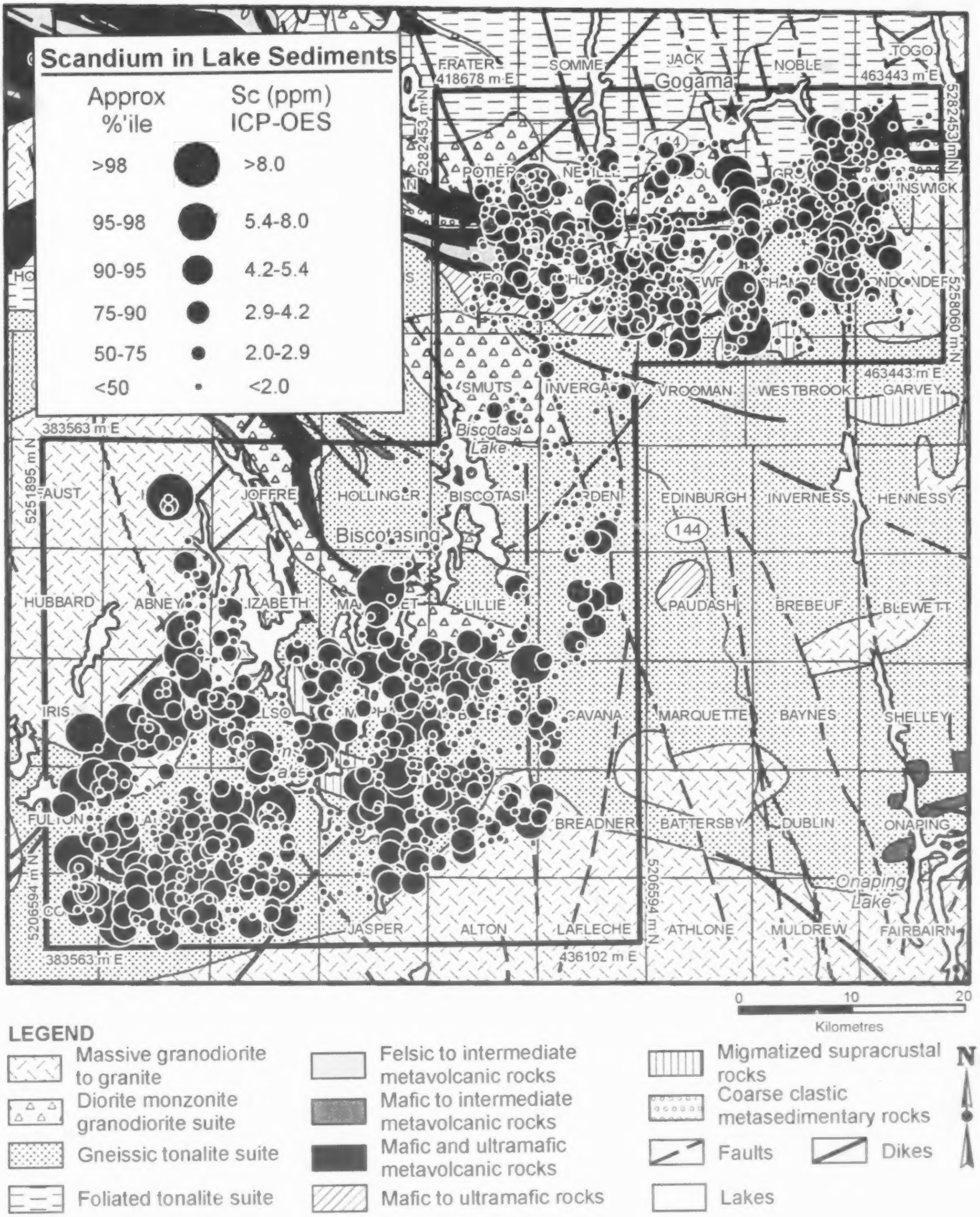
Scandium in Lake Sediments
Approx %'ile
Sc (ppm) ICP-OES
>98 >8.0
95-98 5.4-8.0
90-95 4.2-5.4
75-90 2.9-4.2
50-75 2.0-2.9
<50 <2.0
FRATER
418678 m E
SOMME
JACK
Gogama
NOBLE
TOGO
463443 m E
5282453 m N
POTIER
NEVILLE
BRUNSWICK
CHAMPAGNE
LONDONDERRY
5258060 m N
SMUTS
INVERGARRY
VROOMAN
WESTBROOK
463443 m E
GARVEY
Biscotasi Lake
383563 m E
5251895 m N
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JOFFRE
HOLLINGER
BISCOTASI
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HENNESSY
144
Biscotasing
HUBBARD
ABNEY
ELIZABETH
LILLIE
PAUDASH
BREBEUF
BLEWETT
IRIS
CAVANA
MARQUETTE
BAYNES
SHELLEY
FULTON
BREADNER
BATTERSBY
DUBLIN
ONAPING
5206594 m N
Onaping Lake
JASPER
ALTON
LAFLECHE
ATHLONE
MULDREW
FAIRBAIRN
383563 m E
436102 m E
0
10
20
Kilometres
LEGEND
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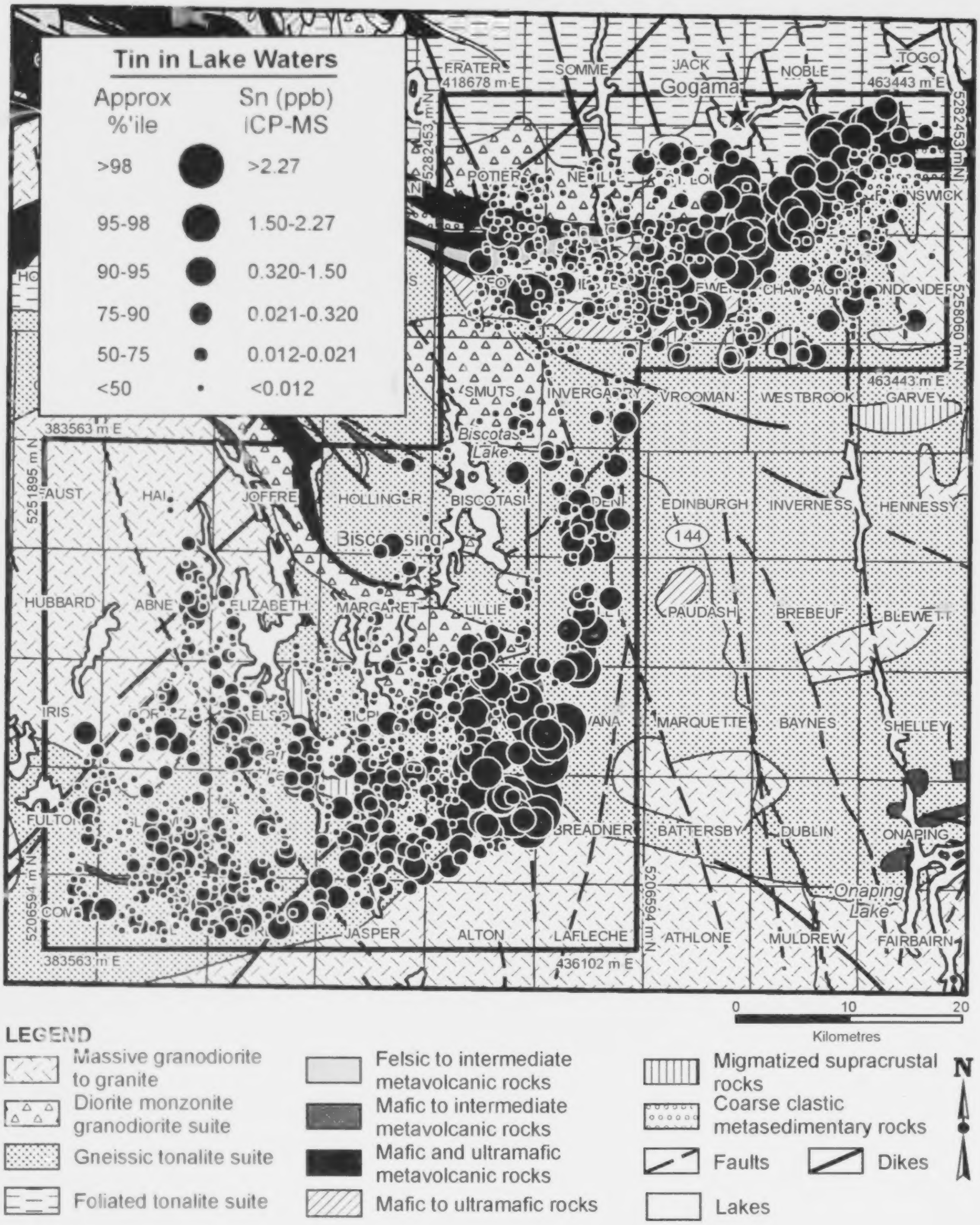
Mafic to ultramafic rocks
Migmatized supracrustal rocks
Coarse clastic metasedimentary rocks
Faults
Dikes
Lakes
N


Tin in Lake Waters
Approx %'ile
Sn (ppb) ICP-MS
>98
>2.27
95-98
1.50-2.27
90-95
0.320-1.50
75-90
0.021-0.320
50-75
0.012-0.021
<50
<0.012
FRATER
418678 m E
SOMME
JACK
Gogama
NOBLE
TOGO
463443 m E
5282453 m N
POTIER
NSWICK
CHAMPAGNE
ONDONDEF
5258060 m N
463443 m E
SMUTS
INVERGARRY
VROOMAN
WESTBROOK
GARVEY
383563 m E
Biscotasi Lake
5251895 m N
FAUST
HAI
JOFFRE
HOLLINGER
BISCOTASI
EDINBURGH
INVERNESS
HENNESSY
144
Biscotasing
HUBBARD
ABNEY
ELIZABETH
MARGARET
LILLIE
PAUDASH
BREBEUF
BLEWETT
IRIS
MARQUETTE
BAYNES
SHELLEY
FULTON
BREADNER
BATTERSBY
DUBLIN
ONAPING
Onaping Lake
5206594 m N
JASPER
ALTON
LAFLECHE
ATHLONE
MULDREW
FAIRBAIRN
383563 m E
436102 m E
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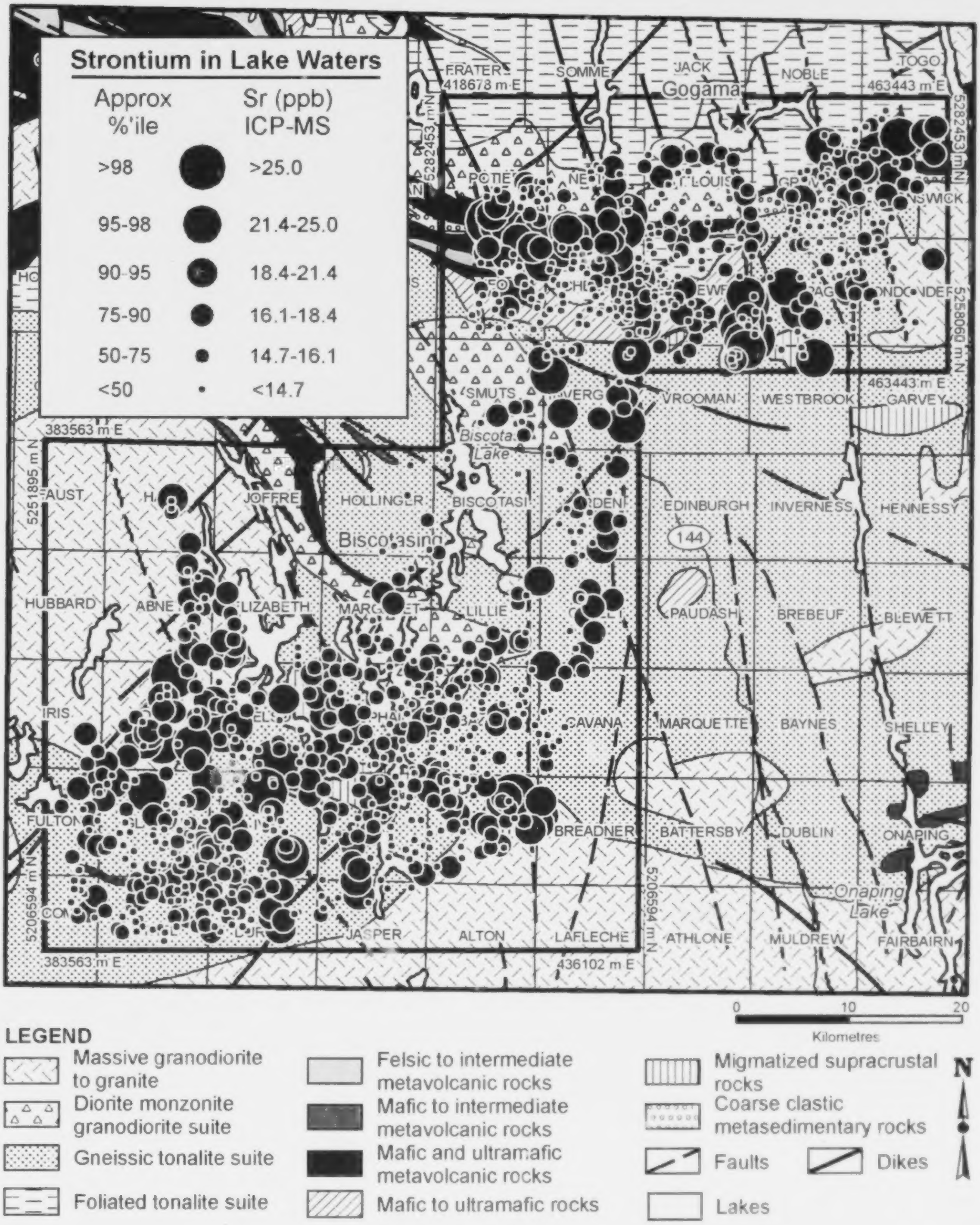
Strontium in Lake Waters
Approx %'ile
Sr (ppb) ICP-MS
>98 >25.0
95-98 21.4-25.0
90-95 18.4-21.4
75-90 16.1-18.4
50-75 14.7-16.1
<50 <14.7
FRATER
418678 m E
SOMME
JACK
Gogama
NOBLE
TOGO
463443 m E
5282453 m N
5282453 m N
POTIER
ST. LOUIS
SMUTS
VROOMAN
WESTBROOK
GARVEY
463443 m E
5258060 m N
383563 m E
5251895 m N
FAUST
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BISCOTASI
Biscota Lake
Biscotasing
EDINBURGH
INVERNESS
HENNESSY
144
HUBBARD
ABNEY
ELIZABETH
LILLIE
PAUDASH
BREBEUF
BLEWETT
IRIS
CAVANA
MARQUETTE
BAYNES
SHELLEY
FULTON
BREADNER
BATTERSBY
DUBLIN
ONAPING
Onaping Lake
5206594 m N
5206594 m N
JASPER
ALTON
LAFLECHE
ATHLONE
MULDREW
FAIRBAIRN
383563 m E
436102 m E
0
10
20
Kilometres
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Mafic to ultramafic rocks
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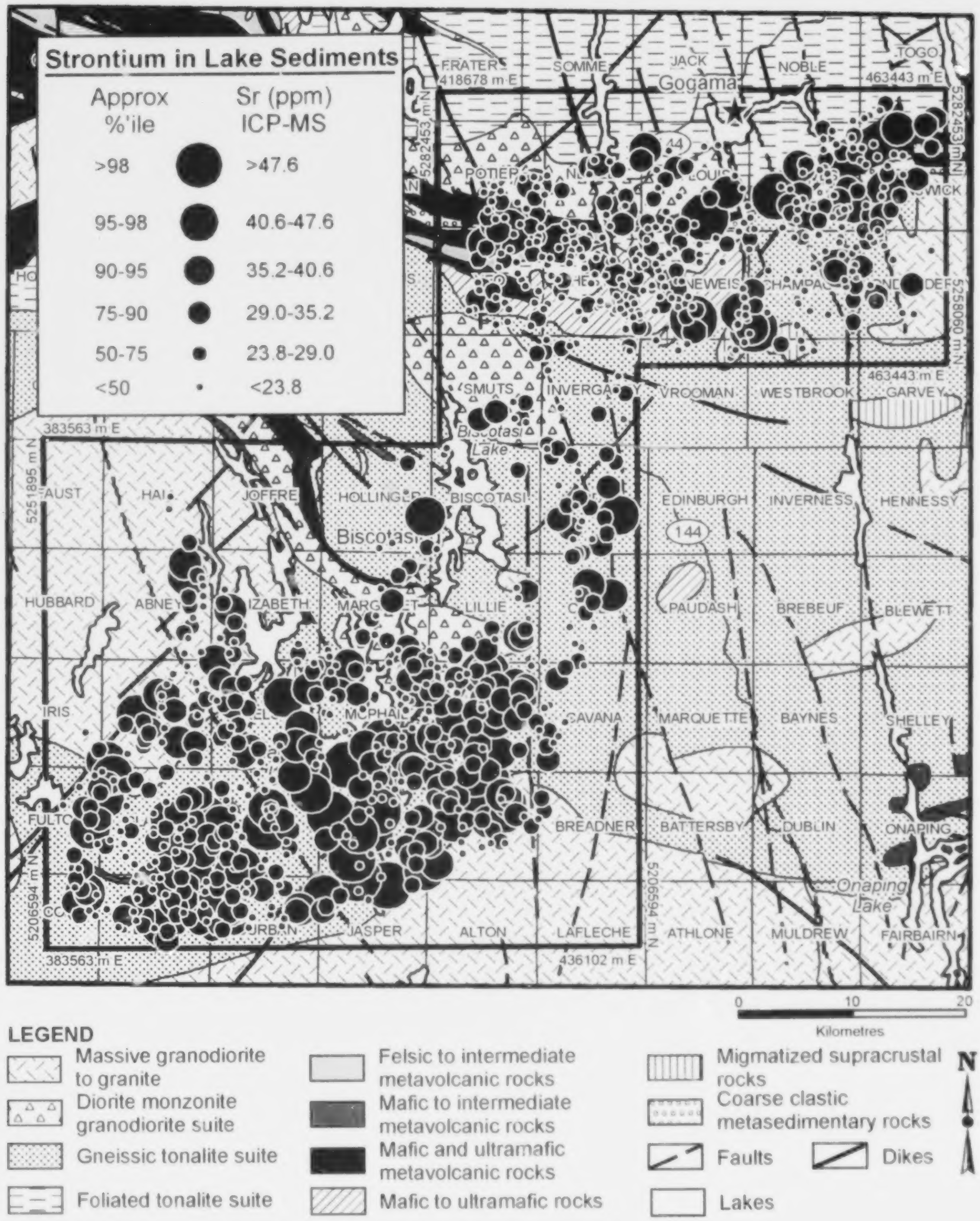
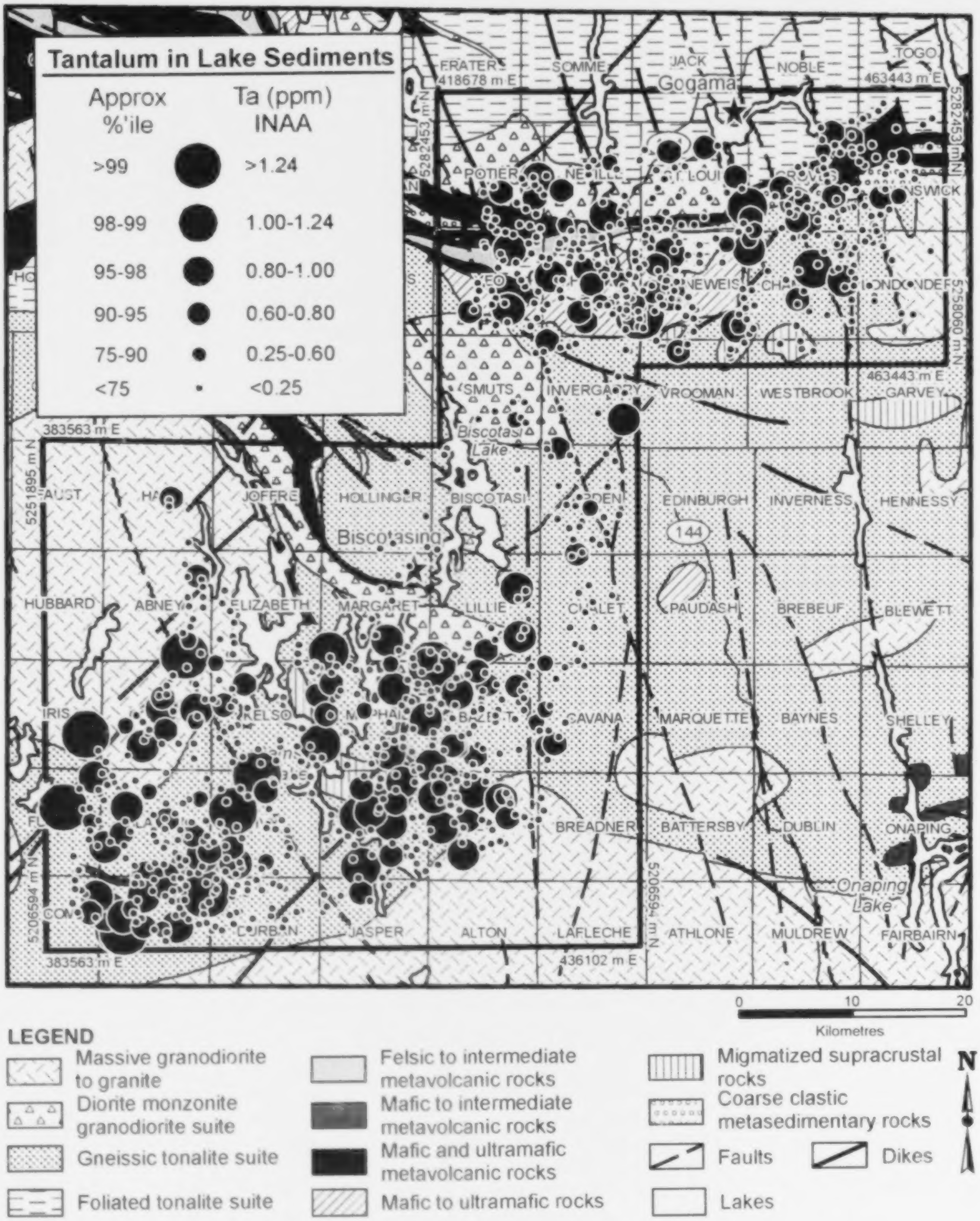
Lakes
N


Strontium in Lake Sediments
Approx %'ile
Sr (ppm) ICP-MS
>98 >47.6
95-98 40.6-47.6
90-95 35.2-40.6
75-90 29.0-35.2
50-75 23.8-29.0
<50 <23.8
FRATER
418678 m E
SOMME
JACK
NOBLE
TOGO
463443 m E
Gogama
5282453 m N
POTIER
NEWEIS
CHAMPAGNE
5258060 m N
463443 m E
SMUTS
INVERGARRY
VROOMAN
WESTBROOK
GARVEY
Biscotasi Lake
383563 m E
5251895 m N
FAUST
HAIG
JOFFRE
HOLLINGER
BISCOTASI
EDINBURGH
INVERNESS
HENNESSY
144
HUBBARD
ABNEY
ELIZABETH
MARGARET
LILLIE
PAUDASH
BREBEUF
BLEWETT
IRIS
MCPHAIL
CAVANA
MARQUETTE
BAYNES
SHELLEY
FULTON
BREADNER
BATTERSBY
DUBLIN
ONAPING
Onaping Lake
5206594 m N
URBAN
JASPER
ALTON
LAFLECHE
ATHLONE
MULDREW
FAIRBAIRN
383563 m E
436102 m E
0
10
20
Kilometres
LEGEND
Massive granodiorite to granite
Diorite monzonite granodiorite suite
Gneissic tonalite suite
Foliated tonalite suite
Felsic to intermediate metavolcanic rocks
Mafic to intermediate metavolcanic rocks
Mafic and ultramafic metavolcanic rocks
Mafic to ultramafic rocks
Migmatized supracrustal rocks
Coarse clastic metasedimentary rocks
Faults
Dikes
Lakes
N


Tantalum in Lake Sediments
Approx %'ile
Ta (ppm) INAA
>99
>1.24
98-99
1.00-1.24
95-98
0.80-1.00
90-95
0.60-0.80
75-90
0.25-0.60
<75
<0.25
FRATER
SOMME
JACK
NOBLE
TOGO
418678 m E
463443 m E
Gogama
5282453 m N
POTIER
NEVILLE
ST. LOUIS
NEWEIS
CHA
BRUNSWICK
LONDONDERRY
5258060 m N
SMUTS
INVERGARRY
VROOMAN
WESTBROOK
GARVEY
Biscotasi Lake
383563 m E
5251895 m N
FAUST
JOFFRE
HOLLINGER
BISCOTASI
OGDEN
EDINBURGH
INVERNESS
HENNESSY
144
Biscotasing
HUBBARD
ABNEY
ELIZABETH
MARGARET
LILLIE
CHALET
PAUDASH
BREBEUF
BLEWETT
IRIS
KELSO
MCPHAIL
BAZETT
CAVANA
MARQUETTE
BAYNES
SHELLEY
BREADNER
BATTERSBY
DUBLIN
ONAPING
Onaping Lake
5206594 m N
DURBAN
JASPER
ALTON
LAFLECHE
ATHLONE
MULDREW
FAIRBAIRN
383563 m E
436102 m E
0
10
20
Kilometres
LEGEND
Massive granodiorite to granite
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Migmatized supracrustal rocks
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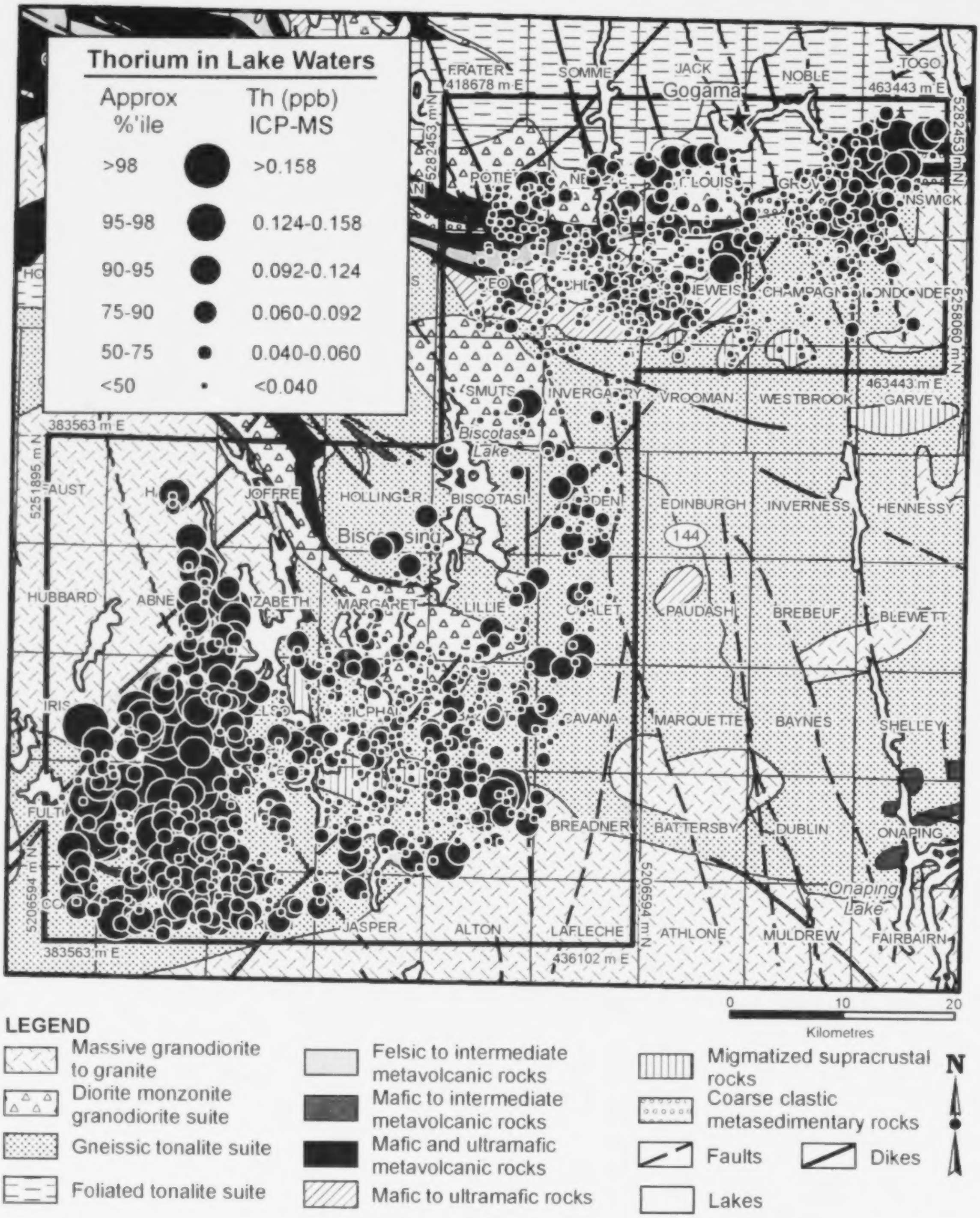
Faults
Dikes
Lakes
N


Thorium in Lake Waters
Approx %'ile
Th (ppb) ICP-MS
>98
>0.158
95-98
0.124-0.158
90-95
0.092-0.124
75-90
0.060-0.092
50-75
0.040-0.060
<50
<0.040
FRATER
418678 m E
SOMME
JACK
Gogama
NOBLE
TOGO
463443 m E
5282453 m N
POTIE
LOUIS
GRO
NSWICK
NEWEIS
CHAMPAGN
ONDONDEF
5258060 m N
463443 m E
SMUTS
INVERGARRY
VROOMAN
WESTBROOK
GARVEY
Biscotasi Lake
383563 m E
5251895 m N
FAUST
JOFFRE
HOLLINGER
BISCOTASI
EDINBURGH
INVERNESS
HENNESSY
144
HUBBARD
ABNE
ZABETH
MARGARET
LILLIE
CHALET
PAUDASH
BREBEUF
BLEWETT
IRIS
CAVANA
MARQUETTE
BAYNES
SHELLEY
FULT
BREADNER
BATTERSBY
DUBLIN
ONAPING
Onaping Lake
5206594 m N
JASPER
ALTON
LAFLECHE
ATHLONE
MULDREW
FAIRBAIRN
383563 m E
436102 m E
0
10
20
Kilometres
LEGEND
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Mafic and ultramafic metavolcanic rocks
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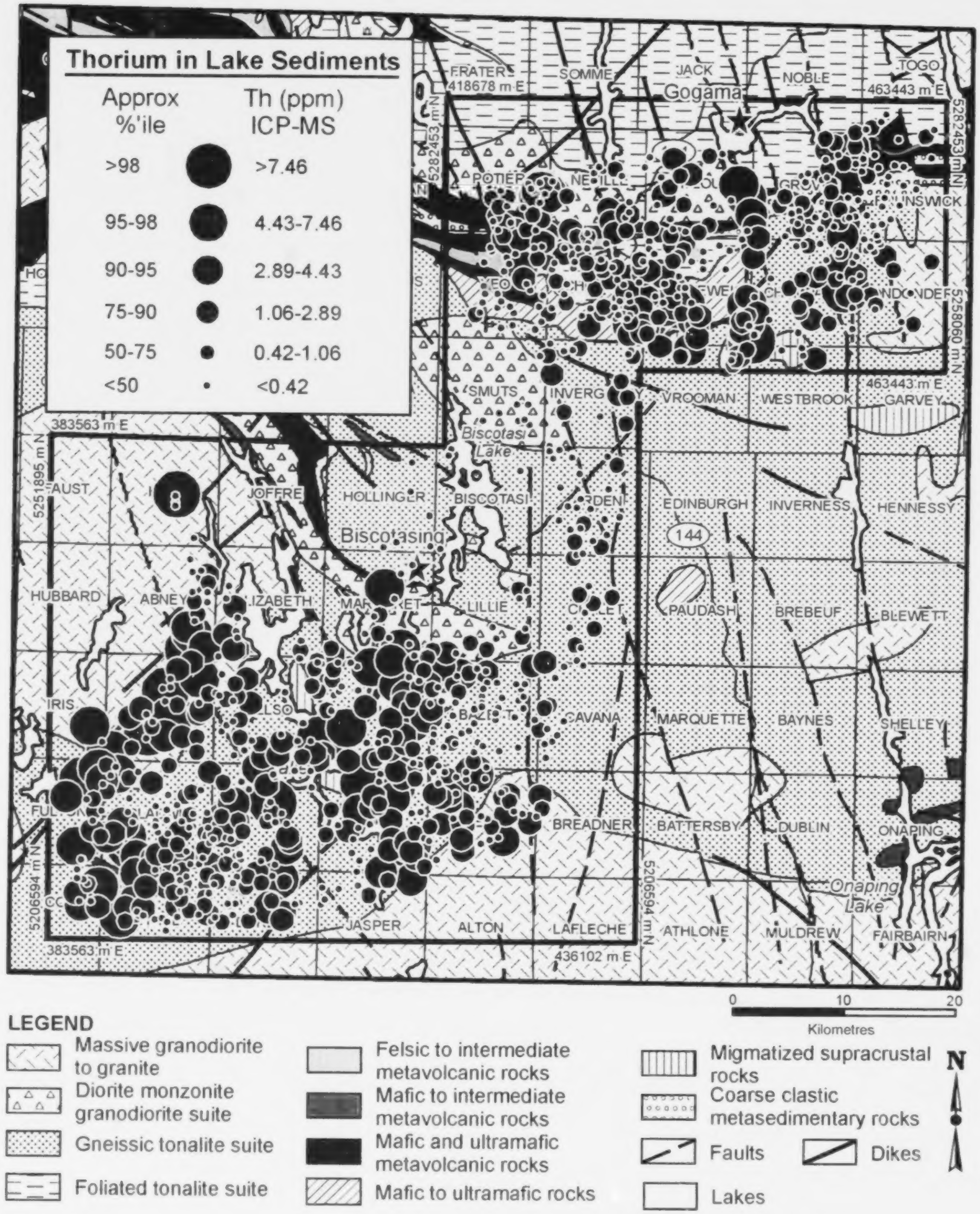
Migmatized supracrustal rocks
Coarse clastic metasedimentary rocks
Faults
Dikes
Lakes
N


Thorium in Lake Sediments
Approx %'ile
Th (ppm) ICP-MS
>98 >7.46
95-98 4.43-7.46
90-95 2.89-4.43
75-90 1.06-2.89
50-75 0.42-1.06
<50 <0.42
FRATER
418678 m E
SOMME
JACK
Gogama
NOBLE
TOGO
463443 m E
5282453 m N
POTIER
YEO
SMUTS
INVERG
VROOMAN
WESTBROOK
463443 m E
GARVEY
5258060 m N
383563 m E
5251895 m N
FAUST
8
JOFFRE
HOLLINGER
BISCOTASI
Biscotasi Lake
Biscotasing
EDINBURGH
INVERNESS
HENNESSY
144
HUBBARD
ABNEY
IZABETH
LILLIE
PAUDASH
BREBEUF
BLEWETT
IRIS
CAVANA
MARQUETTE
BAYNES
SHELLEY
BREADNER
BATTERSBY
DUBLIN
ONAPING
5206594 m N
Onaping Lake
JASPER
ALTON
LAFLECHE
ATHLONE
MULDREW
FAIRBAIRN
383563 m E
436102 m E
0
10
20
Kilometres
LEGEND
Massive granodiorite to granite
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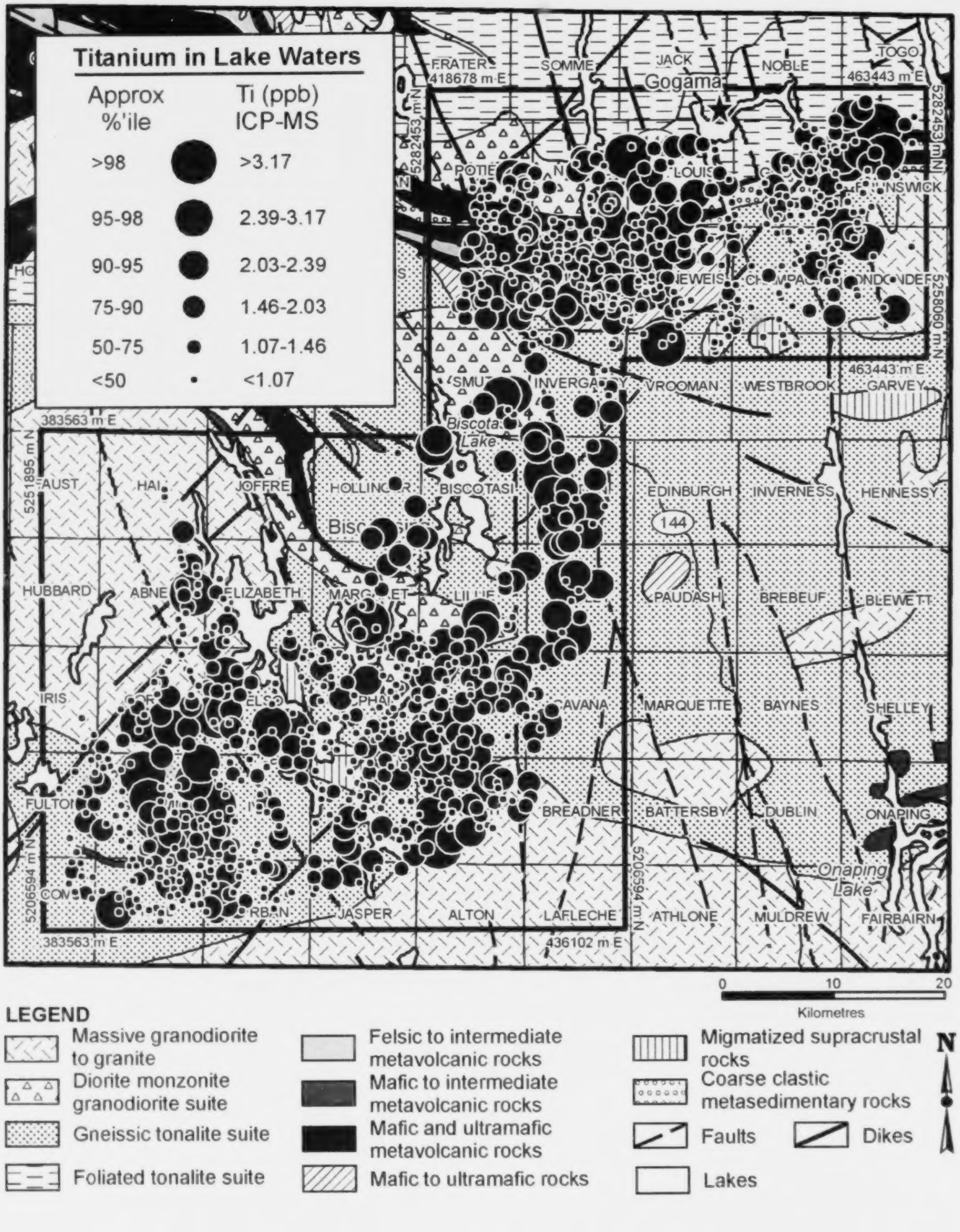
Migmatized supracrustal rocks
Coarse clastic metasedimentary rocks
Faults
Dikes
Lakes
N


Titanium in Lake Waters
Approx %'ile
Ti (ppb) ICP-MS
>98 ● >3.17
95-98 ● 2.39-3.17
90-95 ● 2.03-2.39
75-90 ● 1.46-2.03
50-75 ● 1.07-1.46
<50 • <1.07
FRATER
418678 m E
SOMME
JACK
Gogama
NOBLE
TOGO
463443 m E
5282453 m N
POTIER
LOUIS
BRUNSWICK
NEWEIS
CHAMPAGNE
DONDONDER
5258060 m N
463443 m E
SMUTS
INVERGARRY
VROOMAN
WESTBROOK
GARVEY
Biscotasi Lake
383563 m E
5251895 m N
AUST
HAI
JOFFRE
HOLLINGER
BISCOTASI
EDINBURGH
INVERNESS
HENNESSY
144
HUBBARD
ABNEY
ELIZABETH
MARGARET
LILLIE
PAUDASH
BREBEUF
BLEWETT
IRIS
CAVANA
MARQUETTE
BAYNES
SHELLEY
FULTON
BREADNER
BATTERSBY
DUBLIN
ONAPING
5206594 m N
Onaping Lake
COWIE
JASPER
ALTON
LAFLECHE
ATHLONE
MULDREW
FAIRBAIRN
383563 m E
436102 m E
0
10
20
Kilometres
LEGEND
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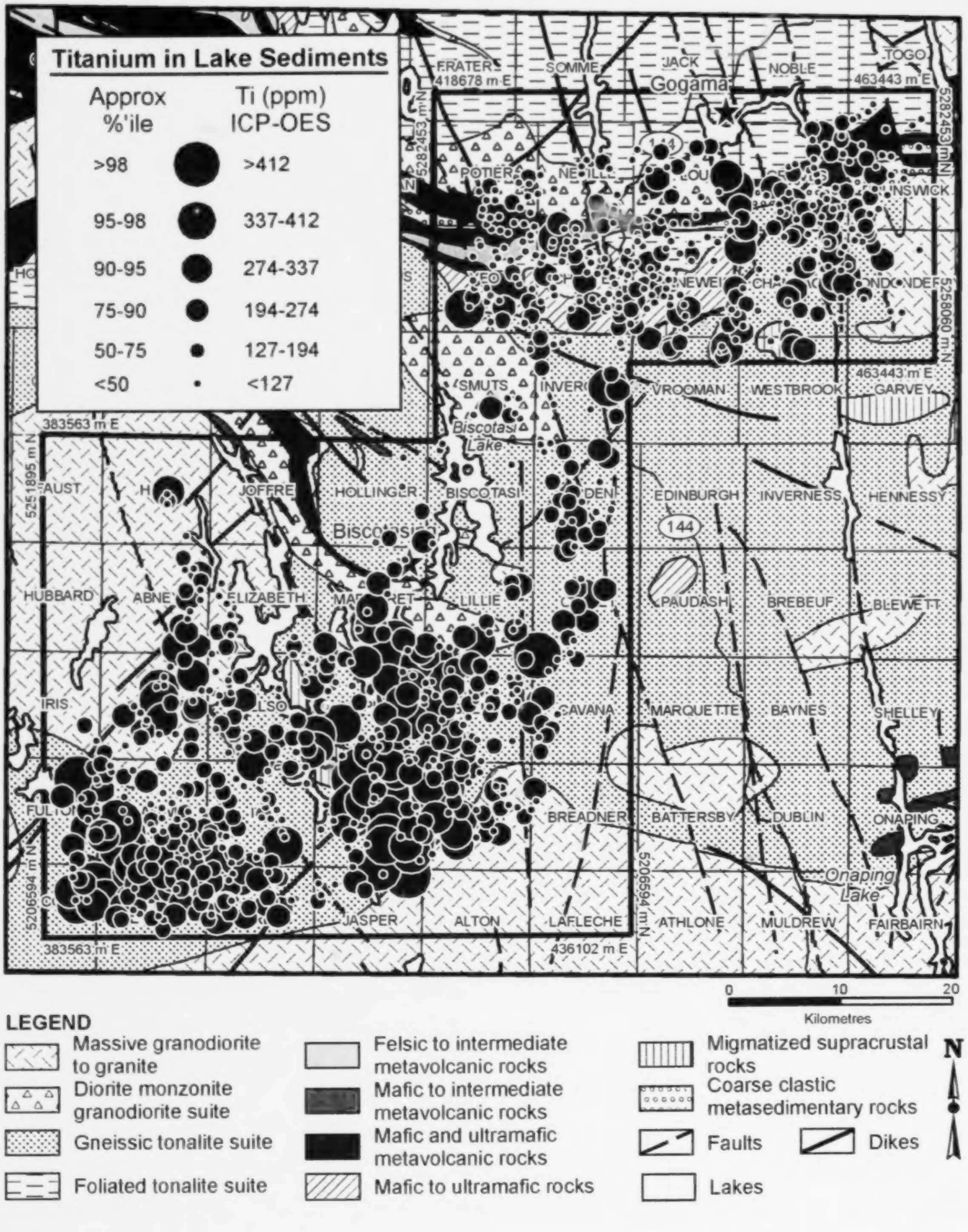
Mafic to ultramafic rocks
Migmatized supracrustal rocks
Coarse clastic metasedimentary rocks
Faults
Dikes
Lakes
N


Titanium in Lake Sediments
Approx %'ile
Ti (ppm) ICP-OES
>98 ● >412
95-98 ● 337-412
90-95 ● 274-337
75-90 ● 194-274
50-75 ● 127-194
<50 • <127
FRATER
418678 m E
SOMME
JACK
Gogama
NOBLE
TOGO
463443 m E
5282453 m N
POTIER
NEVILLE
INSWICK
NEWEI
CHA
ONDONDEF
5258060 m N
463443 m E
SMUTS
INVER
VROOMAN
WESTBROOK
GARVEY
Biscotasi Lake
383563 m E
5251895 m N
FAUST
JOFFRE
HOLLINGER
BISCOTASI
DENI
EDINBURGH
INVERNESS
HENNESSY
144
Biscotasi
HUBBARD
ABNE
ELIZABETH
LILLIE
PAUDASH
BREBEUF
BLEWETT
IRIS
CAVANA
MARQUETTE
BAYNES
SHELLEY
FULTON
BREADNER
BATTERSBY
DUBLIN
ONAPING
Onaping Lake
5206594 m N
JASPER
ALTON
LAFLECHE
ATHLONE
MULDREW
FAIRBAIRN
383563 m E
436102 m E
0
10
20
Kilometres
LEGEND
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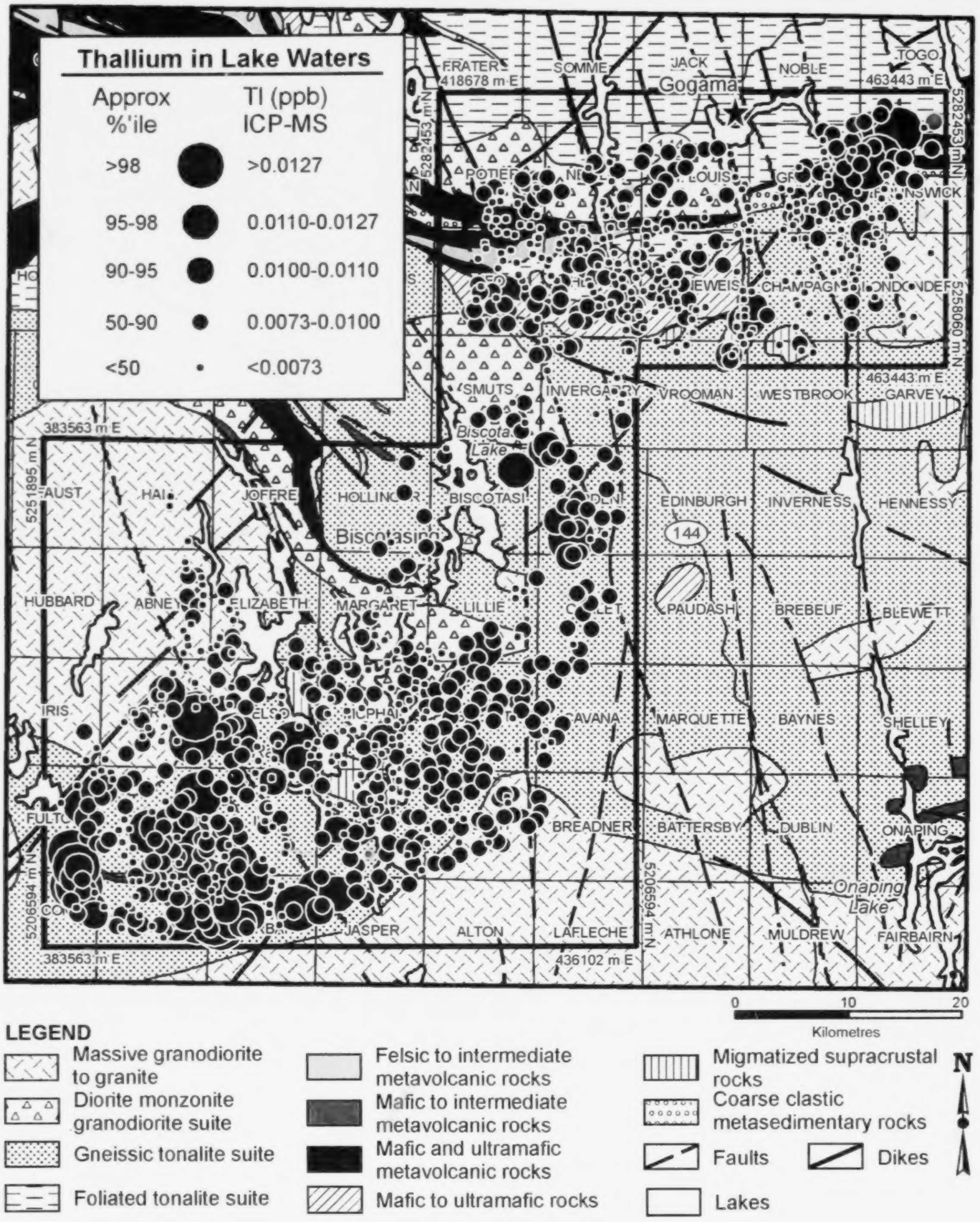
N


Thallium in Lake Waters
Approx %'ile
Tl (ppb) ICP-MS
>98 >0.0127
95-98 0.0110-0.0127
90-95 0.0100-0.0110
50-90 0.0073-0.0100
<50 <0.0073
FRATER 418678 m E
SOMME
JACK
Gogama
NOBLE
TOGO 463443 m E
5282453 m N
POTIER
LOUIS
BRUNSWICK
CHAMPAGNE
LONDONDERRY
5258060 m N
463443 m E
SMUTS
INVERGARRY
VROOMAN
WESTBROOK
GARVEY
383563 m E
Biscotasi Lake
5251895 m N
FAUST
HALL
JOFFRE
HOLLINGER
BISCOTASI
EDINBURGH
INVERNESS
HENNESSY
Biscotasing
144
HUBBARD
ABNEY
ELIZABETH
MARGARET
LILLIE
PAUDASH
BREBEUF
BLEWETT
IRIS
CAVANA
MARQUETTE
BAYNES
SHELLEY
FULTON
BREADNER
BATTERSBY
DUBLIN
ONAPING
Onaping Lake
5206594 m N
JASPER
ALTON
LAFLECHE
ATHLONE
MULDREW
FAIRBAIRN
383563 m E
436102 m E
0
10
20
Kilometres
LEGEND
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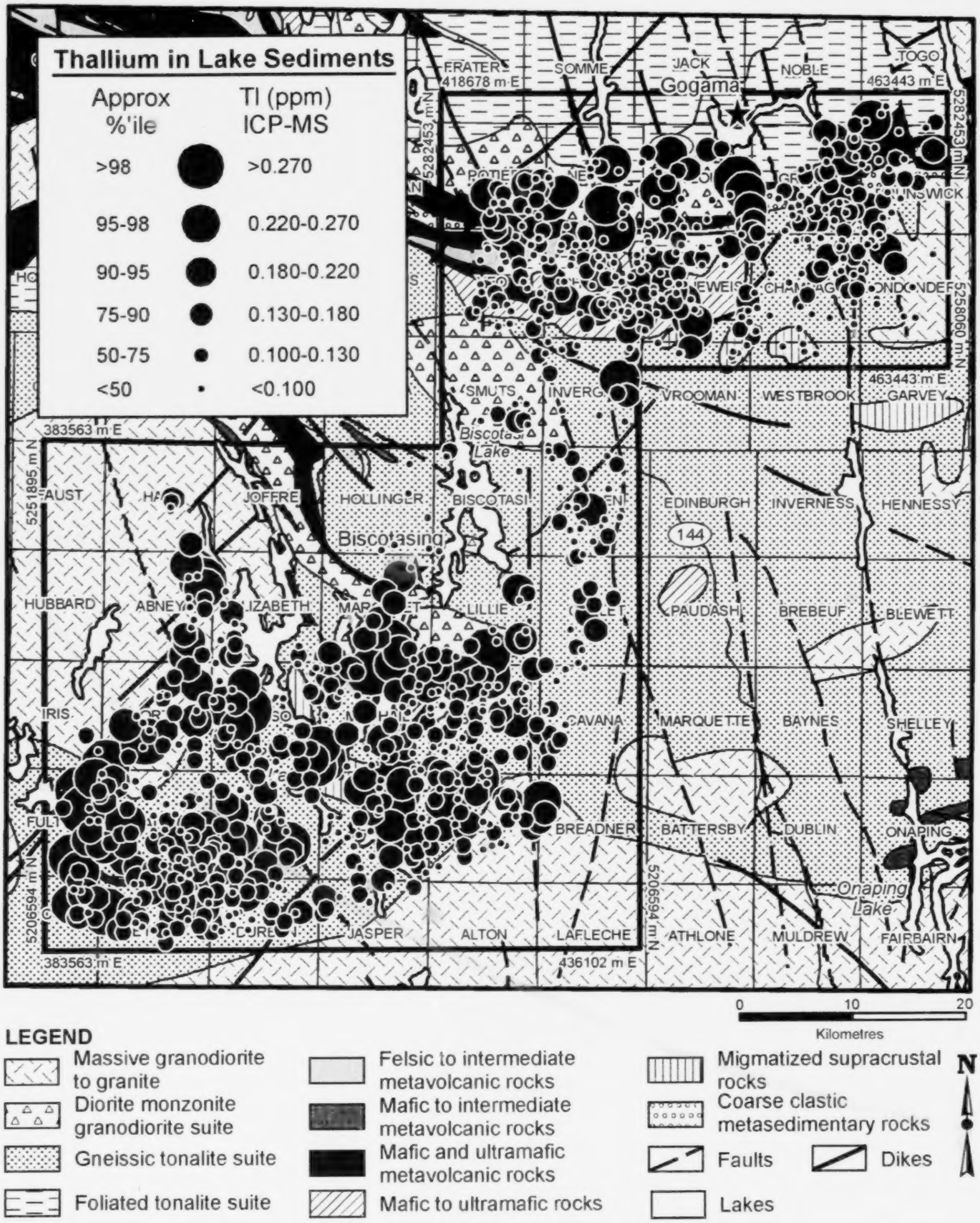
Mafic to ultramafic rocks
Migmatized supracrustal rocks
Coarse clastic metasedimentary rocks
Faults
Dikes
Lakes
N


Thallium in Lake Sediments
Approx %'ile
Tl (ppm) ICP-MS
>98 >0.270
95-98 0.220-0.270
90-95 0.180-0.220
75-90 0.130-0.180
50-75 0.100-0.130
<50 <0.100
FRATER
418678 m E
SOMME
JACK
Gogama
NOBLE
TOGO
463443 m E
5282453 m N
5258060 m N
463443 m E
VROOMAN
WESTBROOK
GARVEY
SMUTS
INVERG
Biscotasi Lake
383563 m E
5251895 m N
FAUST
JOFFRE
HOLLINGER
BISCOTASI
EDINBURGH
INVERNESS
HENNESSY
144
Biscotasing
HUBBARD
ABNEY
LIZABETH
LILLIE
PAUDASH
BREBEUF
BLEWETT
IRIS
CAVANA
MARQUETTE
BAYNES
SHELLEY
BREADNER
BATTERSBY
DUBLIN
ONAPING
Onaping Lake
5206594 m N
JASPER
ALTON
LAFLECHE
ATHLONE
MULDREW
FAIRBAIRN
383563 m E
436102 m E
0
10
20
Kilometres
LEGEND
Massive granodiorite to granite
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Lakes
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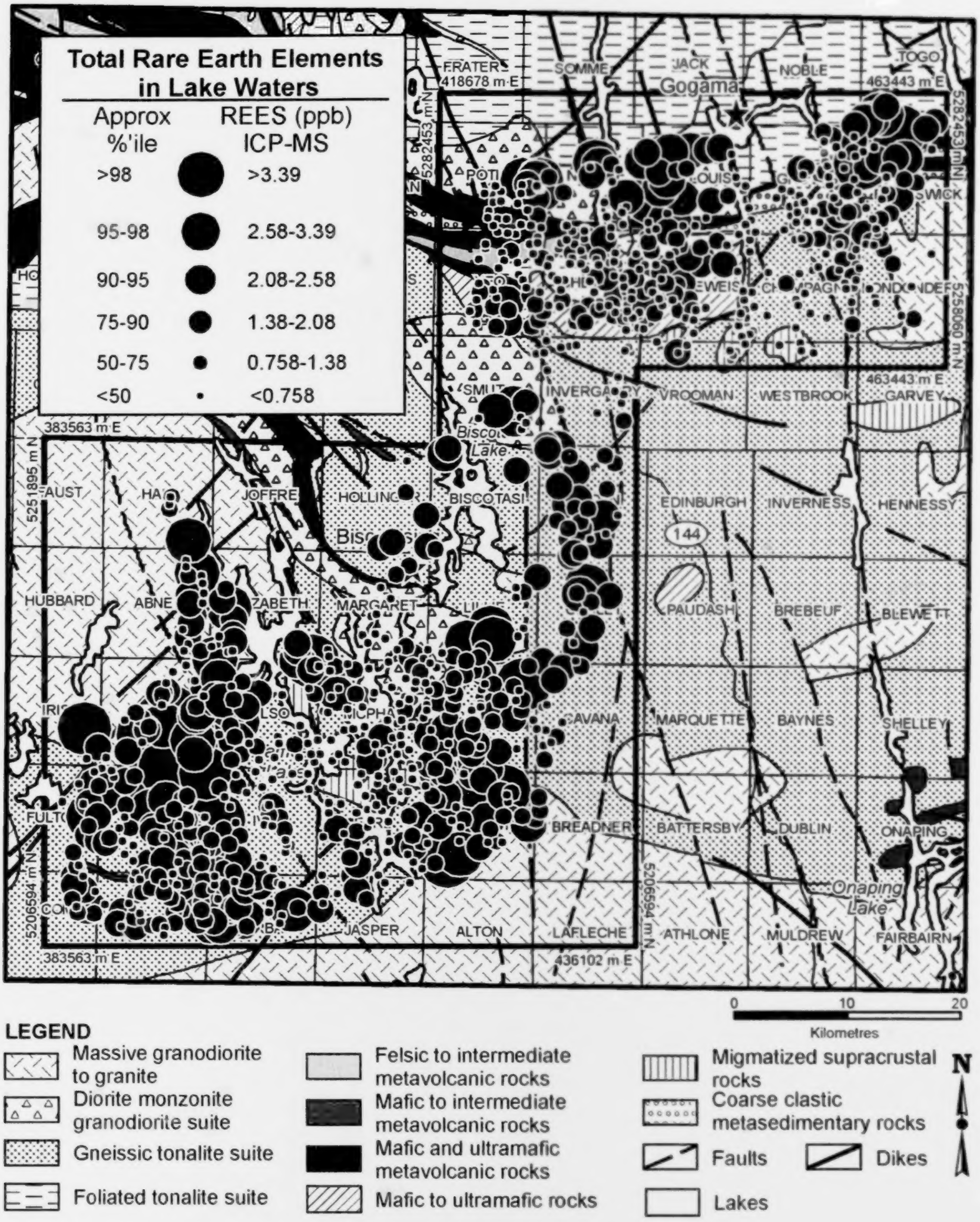
Total Rare Earth Elements in Lake Waters
Approx %'ile
REES (ppb) ICP-MS
>98 ● >3.39
95-98 ● 2.58-3.39
90-95 ● 2.08-2.58
75-90 ● 1.38-2.08
50-75 ● 0.758-1.38
<50 • <0.758
FRATER
418678 m E
SOMME
JACK
Gogama
NOBLE
TOGO
463443 m E
5282453 m N
POTI
LOUIS
SWICK
EWEIS
CHAMPAGNE
ONDONDERRY
5258060 m N
SMUT
INVERGARRY
VROOMAN
WESTBROOK
463443 m E
GARVEY
383563 m E
5251895 m N
FAUST
HA
JOFFRE
HOLLINGER
Biscotasi Lake
BISCOTASI
EDINBURGH
INVERNESS
HENNESSY
144
HUBBARD
ABNEY
ZABETH
MARGARET
PAUDASH
BREBEUF
BLEWETT
IRIS
CAVANA
MARQUETTE
BAYNES
SHELLEY
FULTON
BREADNER
BATTERSBY
DUBLIN
ONAPING
Onaping Lake
5206594 m N
JASPER
ALTON
LAFLECHE
ATHLONE
MULDREW
FAIRBAIRN
383563 m E
436102 m E
0
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20
Kilometres
N
LEGEND
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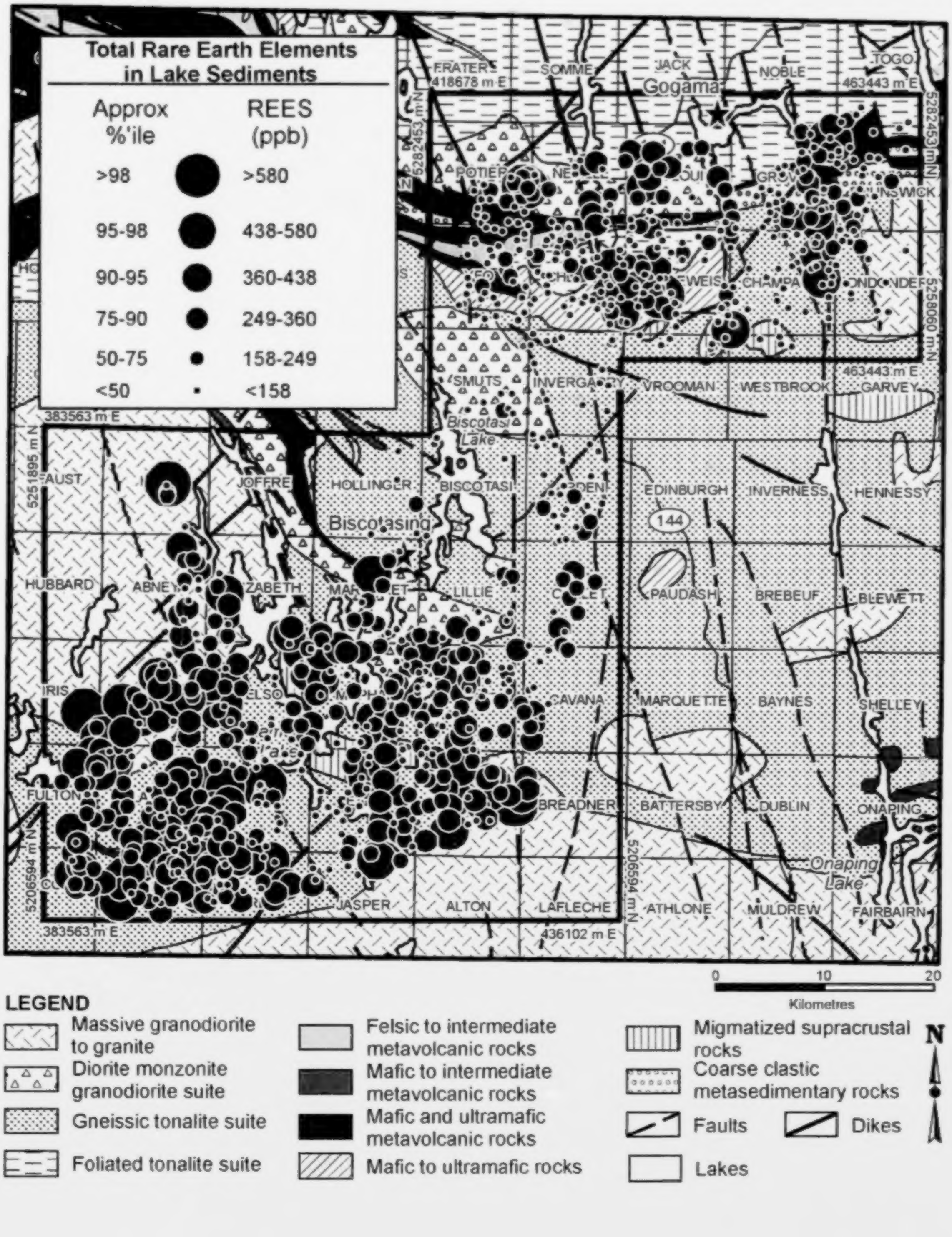
Total Rare Earth Elements in Lake Sediments
Approx %'ile
REES (ppb)
>98 ● >580
95-98 ● 438-580
90-95 ● 360-438
75-90 ● 249-360
50-75 ● 158-249
<50 • <158
FRATER
418678 m E
SOMME
JACK
Gogama
NOBLE
TOGO
463443 m E
5282453 m N
POTIER
GROW
BRUNSWICK
CHAMPA
ONDONDER
5258060 m N
463443 m E
SMUTS
INVERGARRY
VROOMAN
WESTBROOK
GARVEY
Biscotasi Lake
383563 m E
5251895 m N
FAUST
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HUBBARD
ABNEY
ZABETH
LILLIE
PAUDASH
BREBEUF
BLEWETT
IRIS
CAVANA
MARQUETTE
BAYNES
SHELLEY
FULTON
BREADNER
BATTERSBY
DUBLIN
ONAPING
5206594 m N
Onaping Lake
JASPER
ALTON
LAFLECHE
ATHLONE
MULDREW
FAIRBAIRN
383563 m E
436102 m E
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Kilometres
LEGEND
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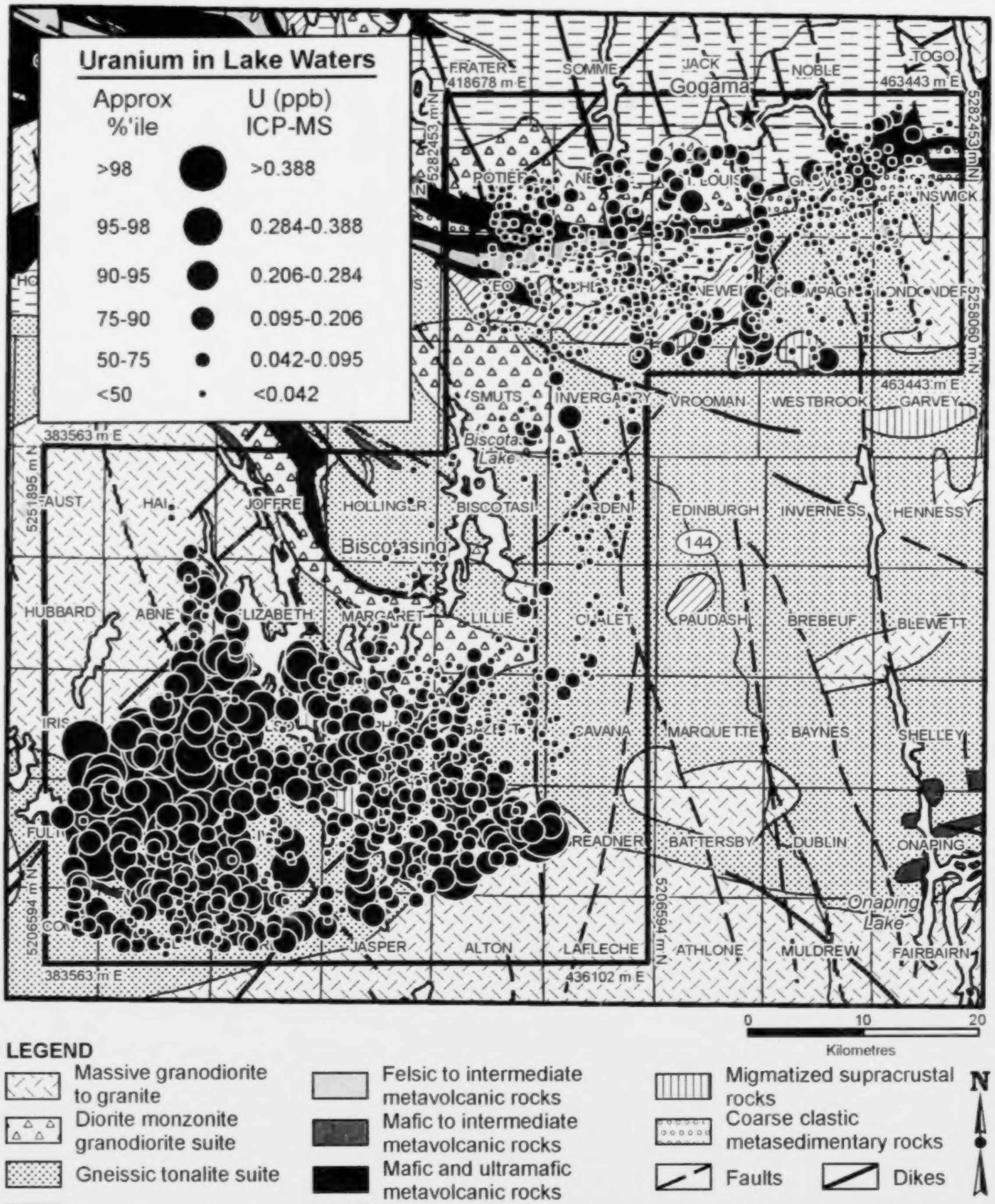
Uranium in Lake Waters
Approx %'ile
U (ppb) ICP-MS
>98 >0.388
95-98 0.284-0.388
90-95 0.206-0.284
75-90 0.095-0.206
50-75 0.042-0.095
<50 <0.042
FRATER
418678 m E
SOMME
JACK
NOBLE
TOGO
463443 m E
Gogama
5282453 m N
POTIER
ST. LOUIS
BRUNSWICK
CHAMPAGNE
LONDONDERRY
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LILLIE
CHALET
PAUDASH
BREBEUF
BLEWETT
IRIS
CAVANA
MARQUETTE
BAYNES
SHELLEY
READNER
BATTERSBY
DUBLIN
ONAPING
Onaping Lake
5206594 m N
JASPER
ALTON
LAFLECHE
ATHLONE
MULDREW
FAIRBAIRN
436102 m E
0 10 20
Kilometres
LEGEND
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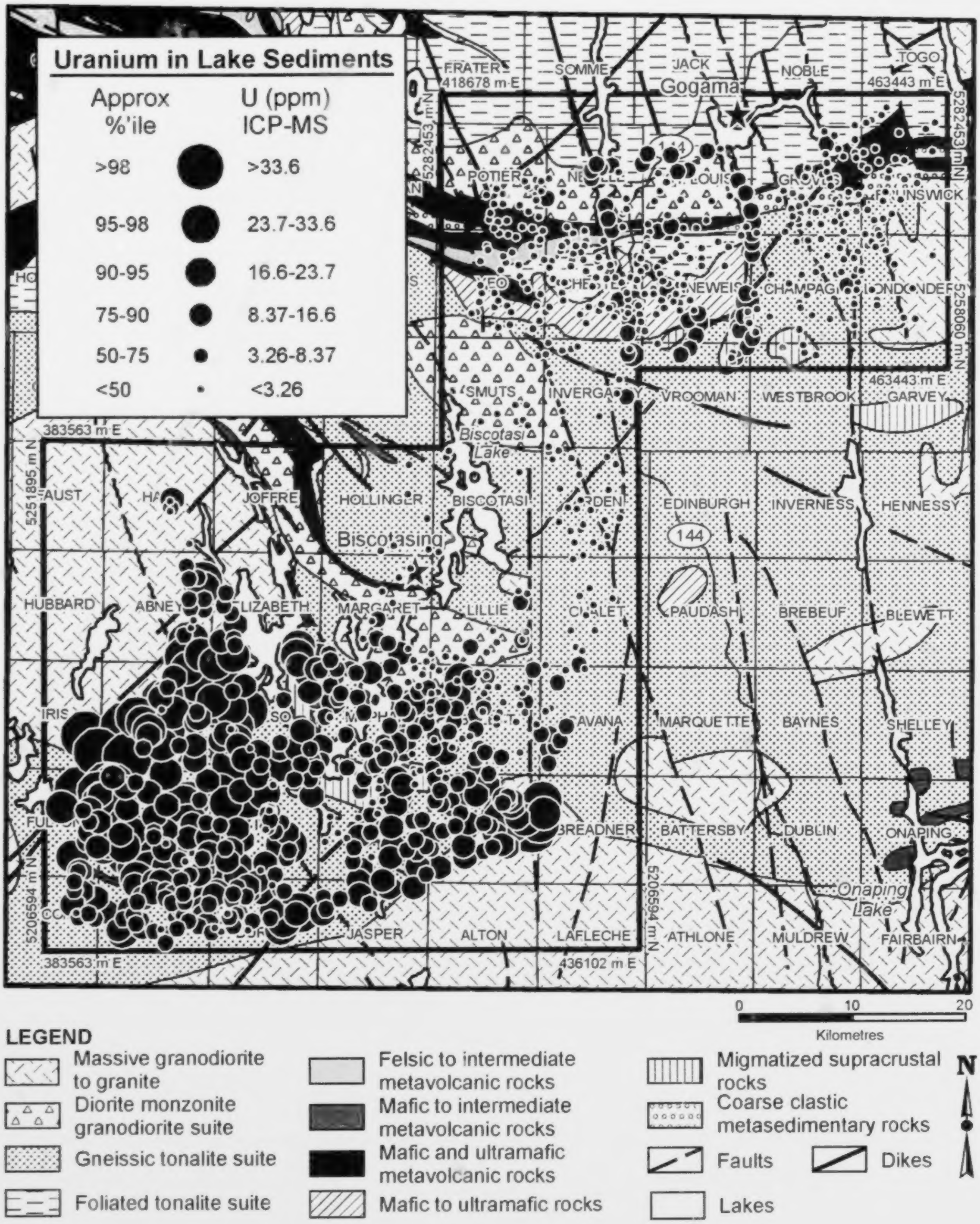
Uranium in Lake Sediments
Approx %'ile
U (ppm) ICP-MS
>98 >33.6
95-98 23.7-33.6
90-95 16.6-23.7
75-90 8.37-16.6
50-75 3.26-8.37
<50 <3.26
FRATER
418678 m E
SOMME
JACK
Gogama
NOBLE
TOGO
463443 m E
5282453 m N
144
POTIER
LOUIS
GROVES
BRUNSWICK
NEWEIS
CHAMPAGNE
LONDONDERRY
5258060 m N
463443 m E
SMUTS
INVERGARRY
VROOMAN
WESTBROOK
GARVEY
383563 m E
Biscotasi Lake
5251895 m N
FAUST
JOFFRE
HOLLINGER
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EDINBURGH
INVERNESS
HENNESSY
Biscotasing
HUBBARD
ABNEY
ELIZABETH
MARGARET
LILLIE
CHALET
PAUDASH
BREBEUF
BLEWETT
IRIS
CAVANA
MARQUETTE
BAYNES
SHELLEY
BREADNER
BATTERSBY
DUBLIN
ONAPING
5206594 m N
Onaping Lake
JASPER
ALTON
LAFLECHE
ATHLONE
MULDREW
FAIRBAIRN
383563 m E
436102 m E
0
10
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Kilometres
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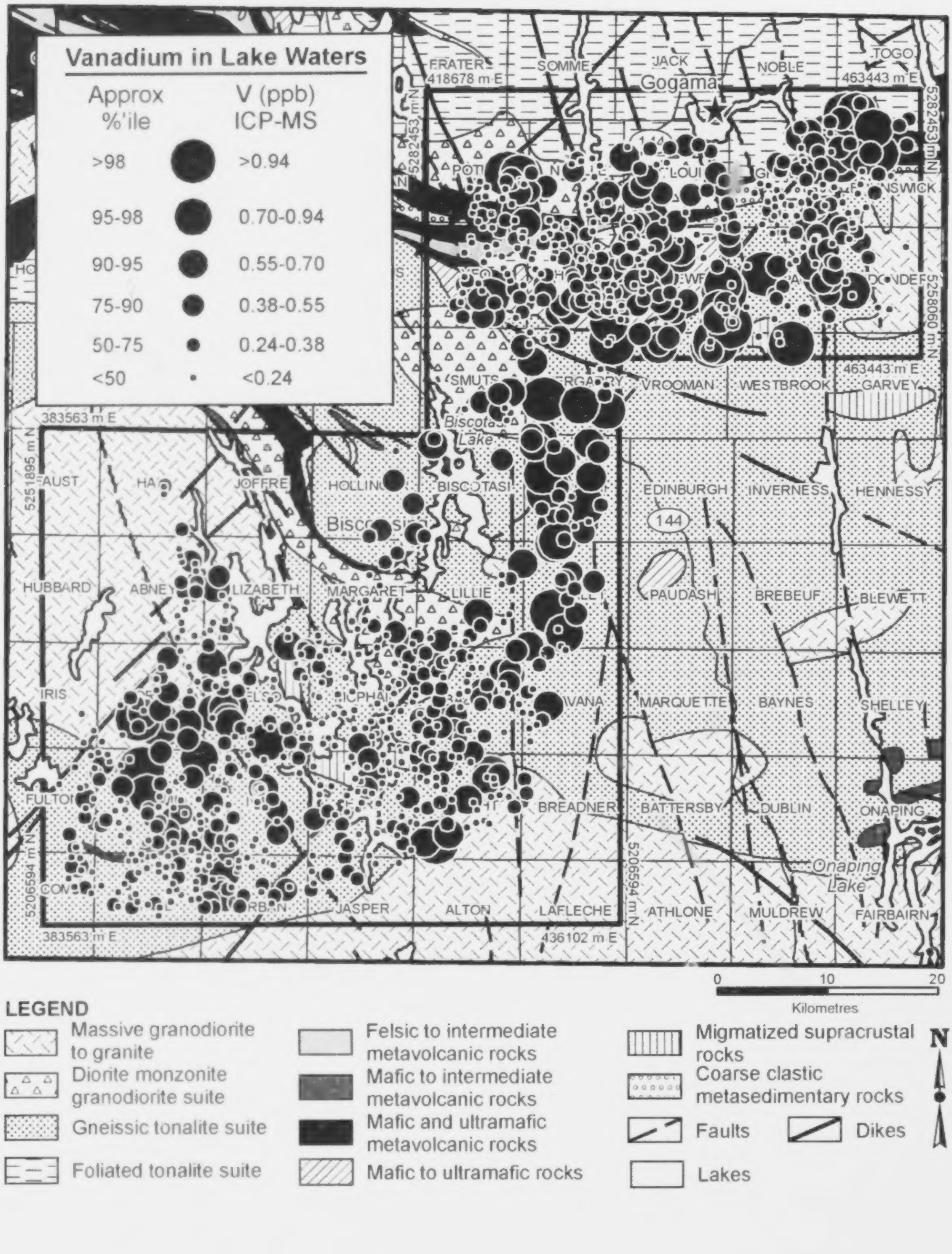
Migmatized supracrustal rocks
Coarse clastic metasedimentary rocks
Faults
Dikes
Lakes
N


Vanadium in Lake Waters
Approx %'ile
V (ppb) ICP-MS
>98 ● >0.94
95-98 ● 0.70-0.94
90-95 ● 0.55-0.70
75-90 ● 0.38-0.55
50-75 ● 0.24-0.38
<50 • <0.24
FRATER
418678 m E
SOMME
JACK
Gogama
NOBLE
TOGO
463443 m E
5282453 m N
5282453 m N
POTI
LOUI
NSWICK
HO
5258060 m N
SMUTS
VROOMAN
WESTBROOK
463443 m E
GARVEY
383563 m E
Biscotasi Lake
5251895 m N
FAUST
JOFFRE
HOLLIN
BISCOTASI
EDINBURGH
INVERNESS
HENNESSY
144
HUBBARD
ABNEY
ELIZABETH
MARGARET
LILLIE
PAUDASH
BREBEUF
BLEWETT
IRIS
MARQUETTE
BAYNES
SHELLEY
FULTON
BREADNER
BATTERSBY
DUBLIN
ONAPING
5206594 m N
5206594 m N
Onaping Lake
JASPER
ALTON
LAFLECHE
ATHLONE
MULDREW
FAIRBAIRN
383563 m E
436102 m E
0
10
20
Kilometres
LEGEND
Massive granodiorite to granite
Diorite monzonite granodiorite suite
Gneissic tonalite suite
Foliated tonalite suite
Felsic to intermediate metavolcanic rocks
Mafic to intermediate metavolcanic rocks
Mafic and ultramafic metavolcanic rocks
Mafic to ultramafic rocks
Migmatized supracrustal rocks
Coarse clastic metasedimentary rocks
Faults
Dikes
Lakes
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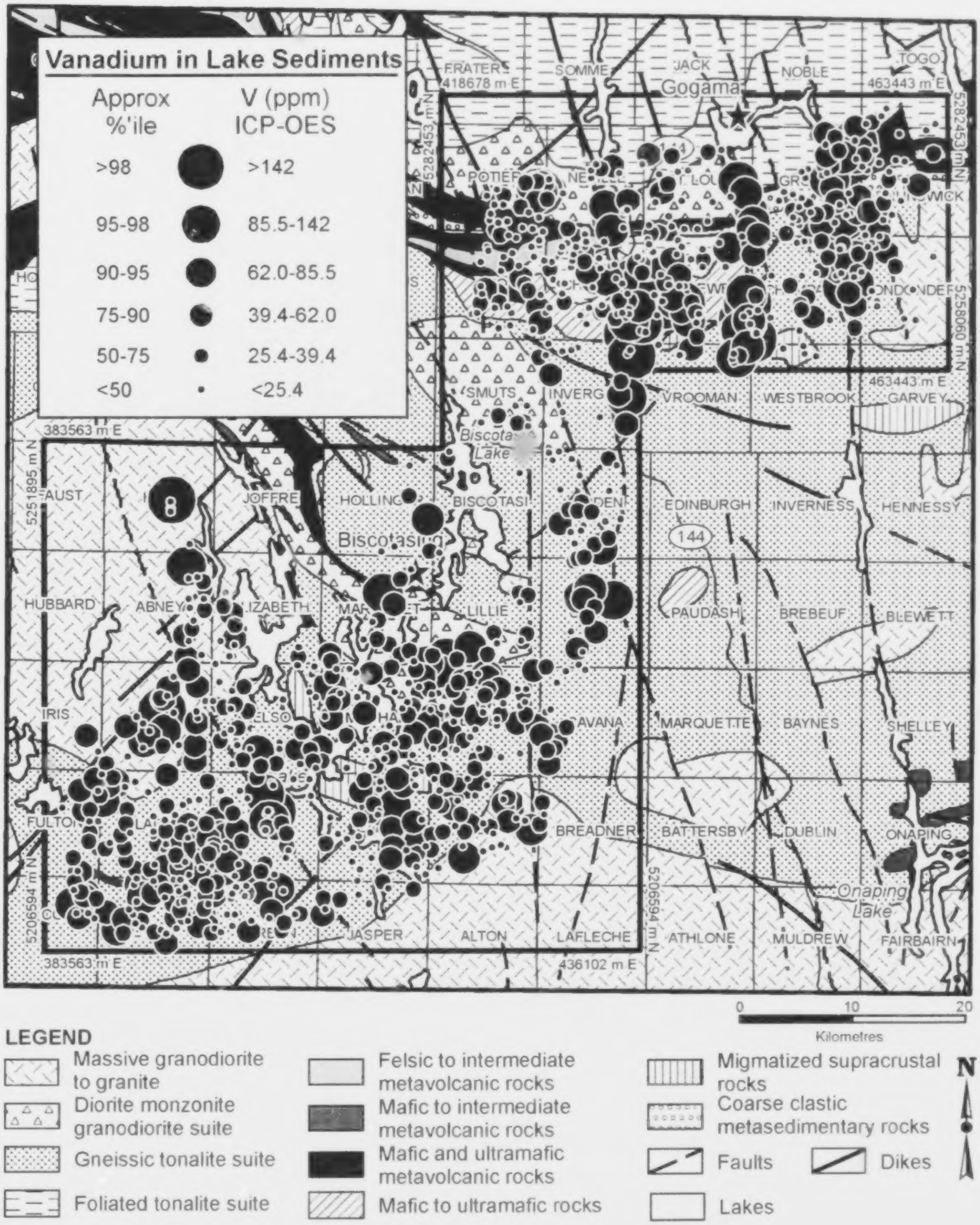Vanadium in Lake Sediments
Approx %'ile
V (ppm) ICP-OES
>98 >142
95-98 85.5-142
90-95 62.0-85.5
75-90 39.4-62.0
50-75 25.4-39.4
<50 <25.4
FRATERS
418678 m E
SOMME
JACK
Gogama
NOBLE
TOGO
463443 m E
5282453 m N
POTIER
NEVILLE
ST. LOUIS
GROVES
RUNNYMEDE
SMUTS
INVERGARRY
VROOMAN
WESTBROOK
GARVEY
5258060 m N
383563 m E
Biscotasi Lake
FAUST
JOFFRE
HOLLINGER
BISCOTASI
DENYES
EDINBURGH
INVERNESS
HENNESSY
Biscotasing
144
HUBBARD
ABNEY
ELIZABETH
MARSHAY
LILLIE
PAUDASH
BREBEUF
BLEWETT
IRIS
CHELSEA
MAHAFFY
AVANA
MARQUETTE
BAYNES
SHELLEY
FULTON
BREADNER
BATTERSBY
DUBLIN
ONAPING
5251895 m N
5206594 m N
JASPER
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LAFLECHE
ATHLONE
MULDREW
FAIRBAIRN
Onaping Lake
436102 m E
0 10 20
Kilometres
N
LEGEND
Massive granodiorite to granite
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Gneissic tonalite suite
Foliated tonalite suite
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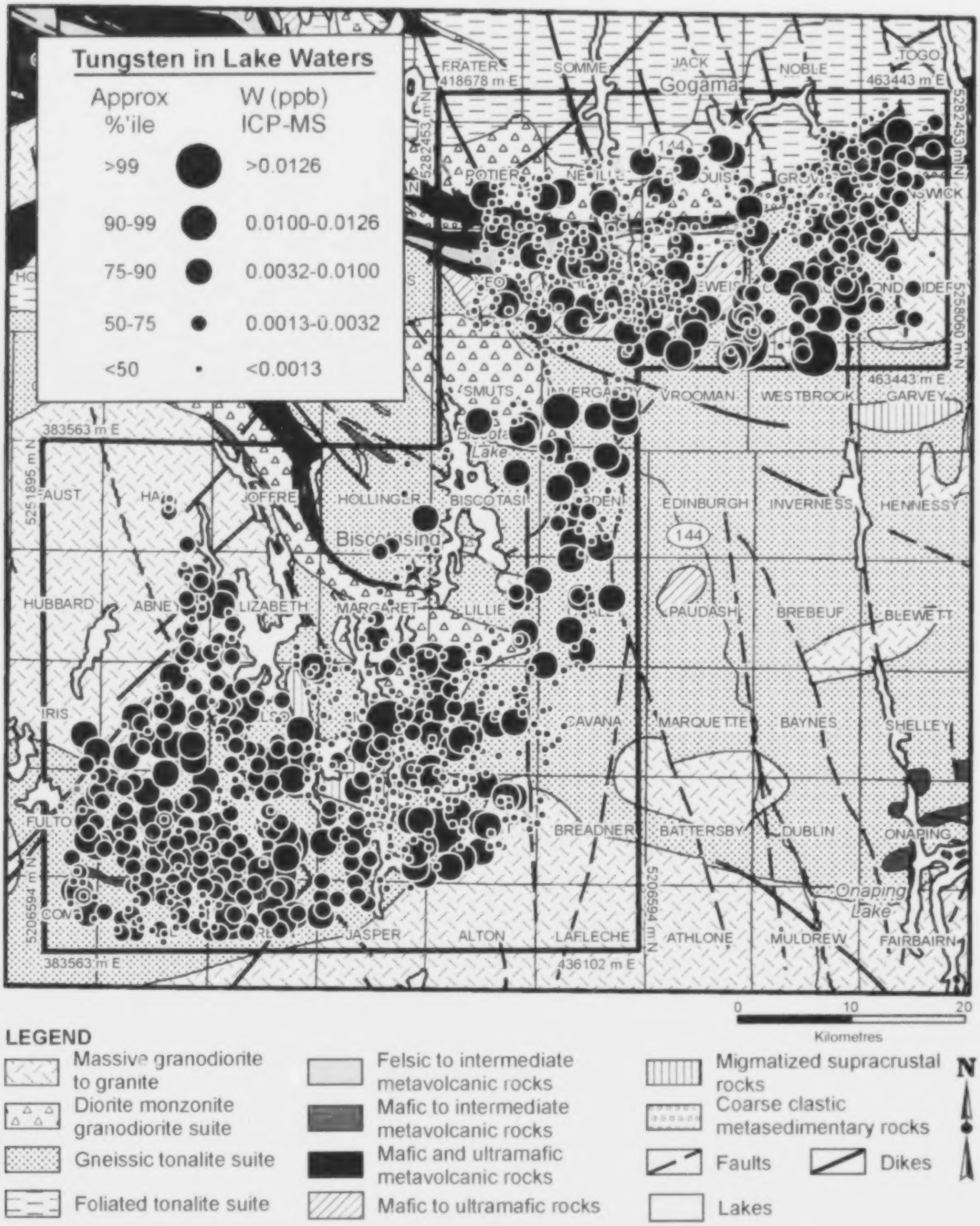
Tungsten in Lake Waters
Approx %'ile
W (ppb) ICP-MS
>99
>0.0126
90-99
0.0100-0.0126
75-90
0.0032-0.0100
50-75
0.0013-0.0032
<50
<0.0013
FRATER
418678 m E
SOMME
JACK
Gogama
NOBLE
TOGO
463443 m E
5282453 m N
POTIER
NEVILLE
LOUIS
GROVES
BRUNSWICK
144
TWEIS
SEWELL
HOLDER
5258060 m N
463443 m E
SMUTS
INVERGARRY
VROOMAN
WESTBROOK
GARVEY
Biscotasi Lake
383563 m E
5251895 m N
FAUST
JOFFRE
HOLLINGER
BISCOTASI
EDINBURGH
INVERNESS
HENNESSY
Biscotasing
HUBBARD
ABNEY
ELIZABETH
MARGARET
LILLIE
PAUDASH
BREBEUF
BLEWETT
IRIS
CAVANA
MARQUETTE
BAYNES
SHELLEY
FULTON
BREADNER
BATTERSBY
DUBLIN
ONAPING
Onaping Lake
5206594 m N
JASPER
ALTON
LAFLECHE
ATHLONE
MULDREW
FAIRBAIRN
383563 m E
436102 m E
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Kilometres
LEGEND
Massive granodiorite to granite
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Migmatized supracrustal rocks
Coarse clastic metasedimentary rocks
Faults
Dikes
Lakes
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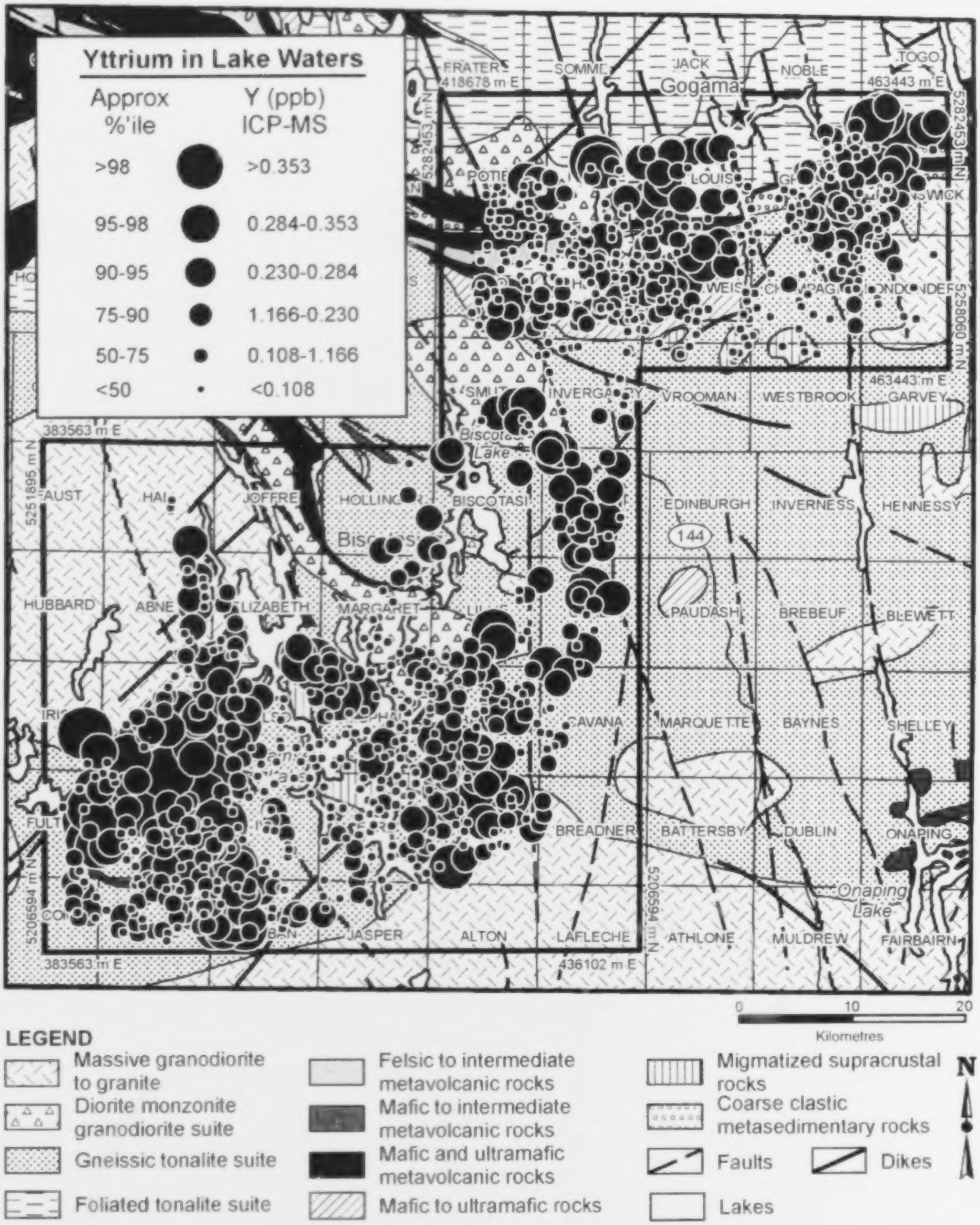

Yttrium in Lake Waters
Approx %'ile
Y (ppb) ICP-MS
>98 >0.353
95-98 0.284-0.353
90-95 0.230-0.284
75-90 1.166-0.230
50-75 0.108-1.166
<50 <0.108
FRATER
418678 m E
SOMME
JACK
Gogama
NOBLE
TOGO
463443 m E
5282453 m N
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5258060 m N
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VROOMAN
WESTBROOK
463443 m E
GARVEY
383563 m E
5251895 m N
FAUST
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HOLLINGER
BISCOTASI
Biscotasi Lake
EDINBURGH
INVERNESS
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144
HUBBARD
ABNEY
ELIZABETH
MARGARET
PAUDASH
BREBEUF
BLEWETT
CAVANA
MARQUETTE
BAYNES
SHELLEY
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BATTERSBY
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Onaping Lake
5206594 m N
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FAIRBAIRN
383563 m E
436102 m E
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Kilometres
LEGEND
Massive granodiorite to granite
Diorite monzonite granodiorite suite
Gneissic tonalite suite
Foliated tonalite suite
Felsic to intermediate metavolcanic rocks
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Mafic and ultramafic metavolcanic rocks
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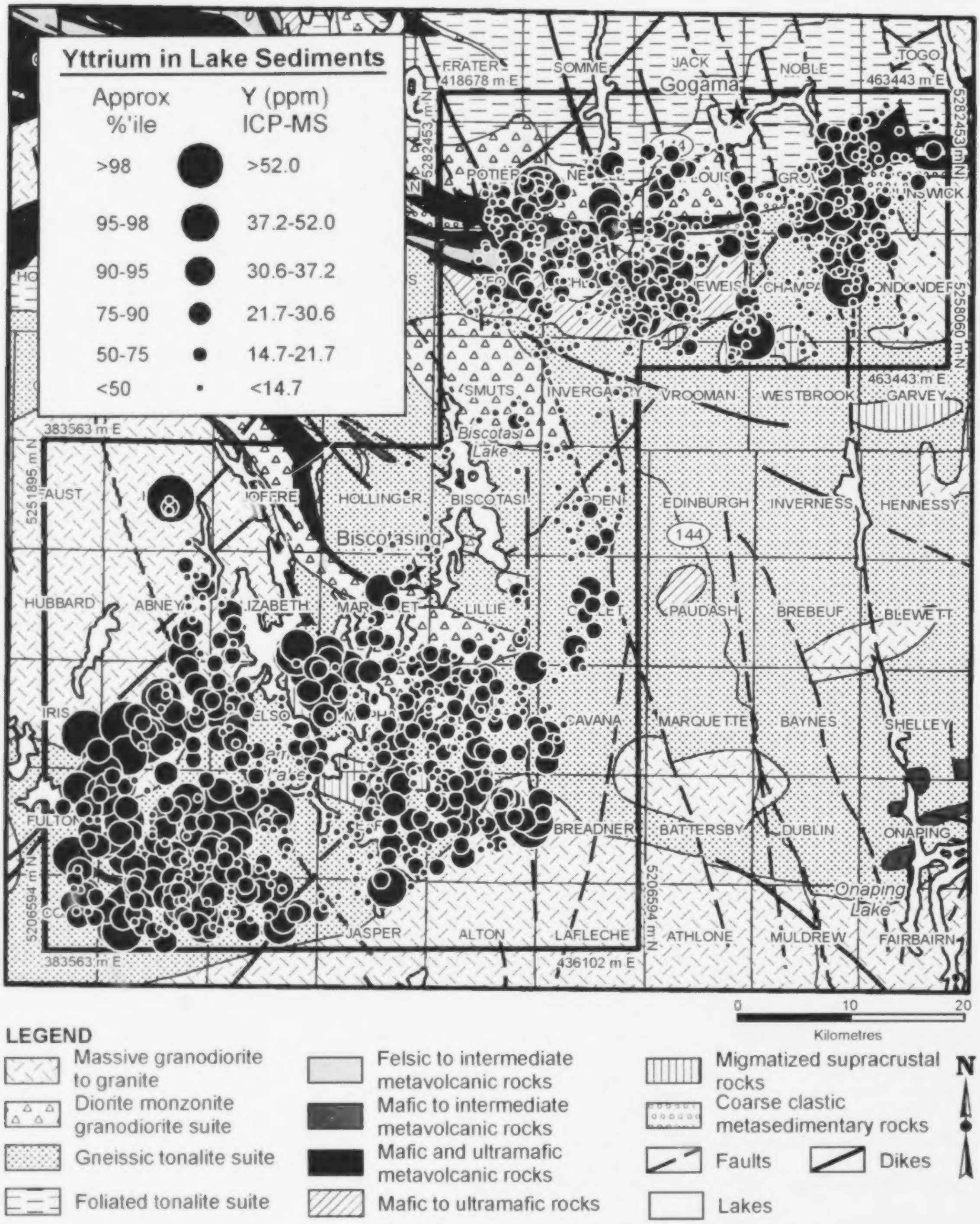
Yttrium in Lake Sediments
Approx %'ile
Y (ppm) ICP-MS
>98 >52.0
95-98 37.2-52.0
90-95 30.6-37.2
75-90 21.7-30.6
50-75 14.7-21.7
<50 <14.7
FRATER
418678 m E
SOMME
JACK
Gogama
NOBLE
TOGO
463443 m E
5282453 m N
5282453 m N
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5251895 m N
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INVERNESS
HENNESSY
Biscotasing
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LILLIE
C ET
PAUDASH
BREBEUF
BLEWETT
IRIS
ELSO
MAPHA
CAVANA
MARQUETTE
BAYNES
SHELLEY
FULTON
BREADNER
BATTERSBY
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5206594 m N
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ATHLONE
MULDREW
FAIRBAIRN
383563 m E
436102 m E
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Kilometres
LEGEND
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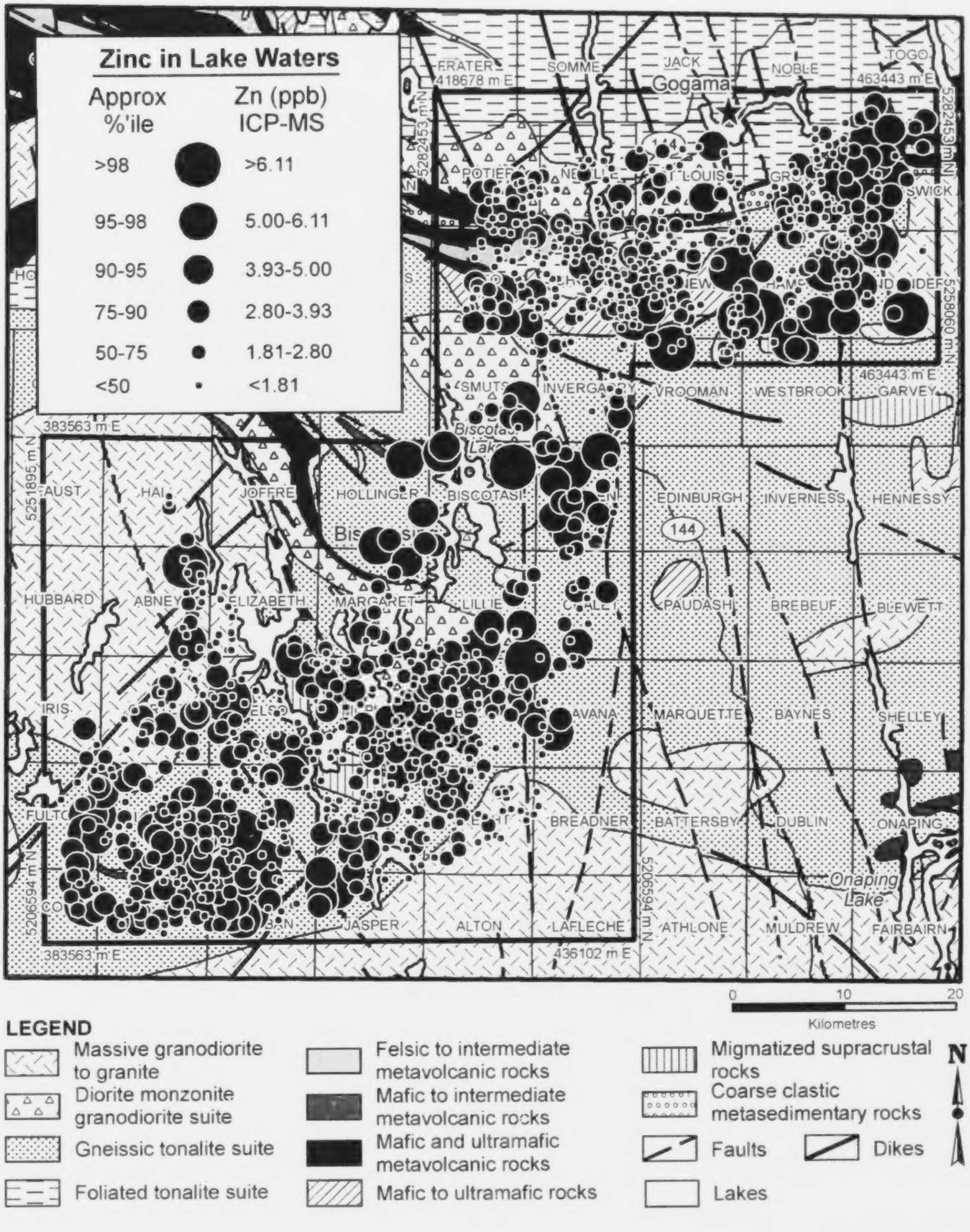
N


Zinc in Lake Waters
Approx %'ile
Zn (ppb) ICP-MS
>98 >6.11
95-98 5.00-6.11
90-95 3.93-5.00
75-90 2.80-3.93
50-75 1.81-2.80
<50 <1.81
FRATER
418678 m E
SOMME
JACK
Gogama
NOBLE
TOGO
463443 m E
5282453 m N
POTIER
ST LOUIS
SWICK
5258060 m N
463443 m E
SMUTS
INVERGARRY
VROOMAN
WESTBROOK
GARVEY
383563 m E
Biscotasi Lake
5251895 m N
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INVERNESS
HENNESSY
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CHALET
PAUDASH
BREBEUF
BLEWETT
IRIS
HAVANA
MARQUETTE
BAYNES
SHELLEY
BREADNER
BATTERSBY
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FAIRBAIRN
383563 m E
436102 m E
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Kilometres
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LEGEND
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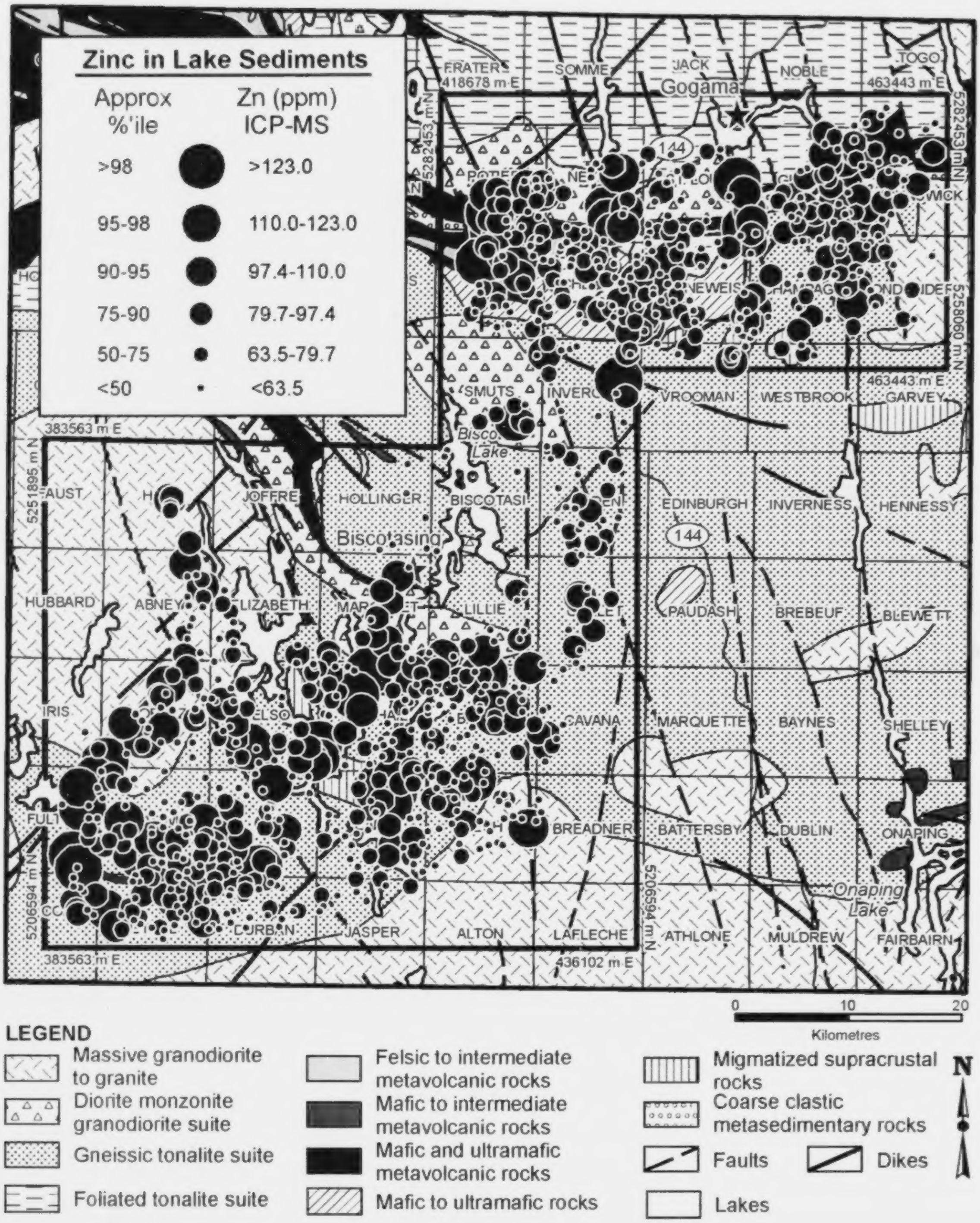
Zinc in Lake Sediments
Approx %'ile
Zn (ppm) ICP-MS
>98 >123.0
95-98 110.0-123.0
90-95 97.4-110.0
75-90 79.7-97.4
50-75 63.5-79.7
<50 <63.5
FRATER
418678 m E
SOMME
JACK
Gogama
NOBLE
TOGO
463443 m E
5282453 m N
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463443 m E
5258060 m N
SMUTS
VROOMAN
WESTBROOK
GARVEY
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5251895 m N
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EDINBURGH
INVERNESS
HENNESSY
HUBBARD
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LILLIE
PAUDASH
BREBEUF
BLEWETT
IRIS
CAVANA
MARQUETTE
BAYNES
SHELLEY
BREADNER
BATTERSBY
DUBLIN
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Onaping Lake
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LAFLECHE
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MULDREW
FAIRBAIRN
383563 m E
436102 m E
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Kilometres
LEGEND
Massive granodiorite to granite
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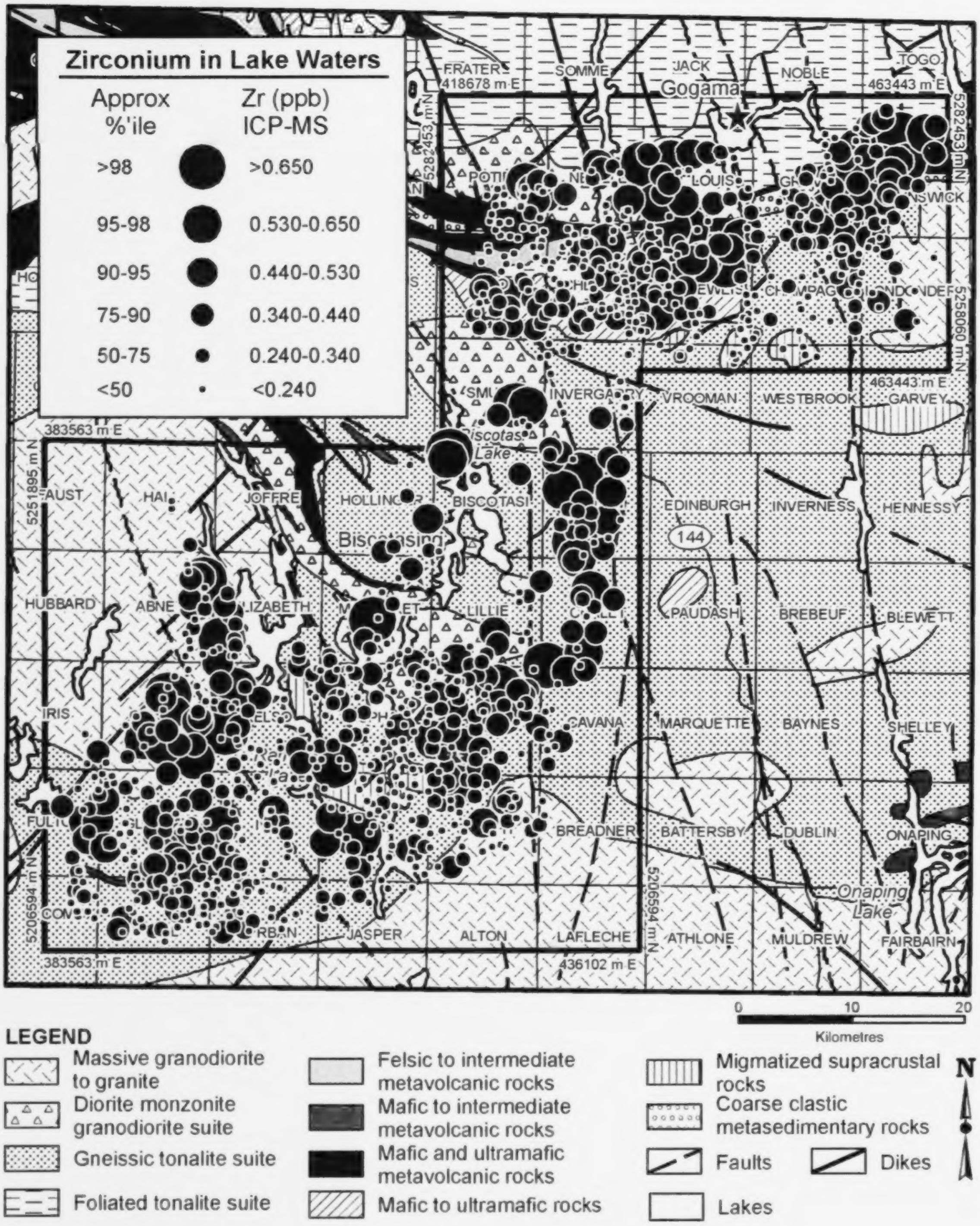
Zirconium in Lake Waters
Approx %'ile
Zr (ppb) ICP-MS
>98 ● >0.650
95-98 ● 0.530-0.650
90-95 ● 0.440-0.530
75-90 ● 0.340-0.440
50-75 ● 0.240-0.340
<50 • <0.240
FRATER
418678 m E
SOMME
JACK
Gogama
NOBLE
TOGO
463443 m E
5282453 m N
5282453 m N
LOUIS
NSWICK
CHAMPAGNE
LONDONDERRY
5258060 m N
463443 m E
INVERGARRY
VROOMAN
WESTBROOK
GARVEY
383563 m E
5251895 m N
FAUST
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JOFFRE
HOLLINGER
BISCOTASI
Biscotasing
Biscotasi Lake
EDINBURGH
INVERNESS
HENNESSY
144
HUBBARD
ABNEY
ELIZABETH
LILLIE
PAUDASH
BREBEUF
BLEWETT
IRIS
CAVANA
MARQUETTE
BAYNES
SHELLEY
BREADNER
BATTERSBY
DUBLIN
ONAPING
Onaping Lake
5206594 m N
5206594 m N
COMRIE
JASPER
ALTON
LAFLECHE
ATHLONE
MULDREW
FAIRBAIRN
383563 m E
436102 m E
0
10
20
Kilometres
N
LEGEND
Massive granodiorite to granite
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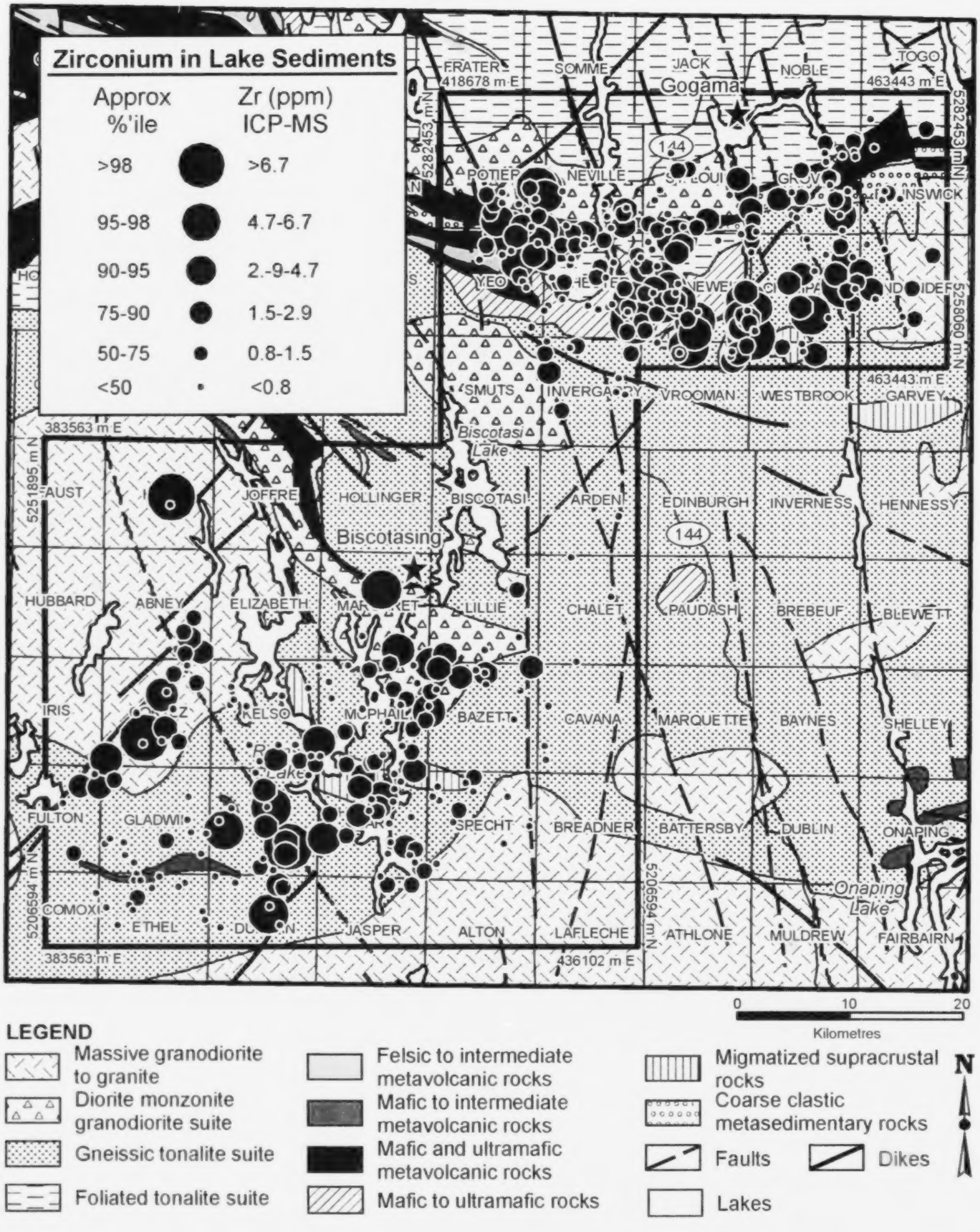
Zirconium in Lake Sediments
Approx %'ile
Zr (ppm) ICP-MS
>98 >6.7
95-98 4.7-6.7
90-95 2.-9-4.7
75-90 1.5-2.9
50-75 0.8-1.5
<50 <0.8
FRATER
418678 m E
SOMME
JACK
Gogama
NOBLE
TOGO
463443 m E
5282453 m N
144
POTIER
NEVILLE
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INVERGA RY
VROOMAN
WESTBROOK
GARVEY
463443 m E
5258060 m N
383563 m E
Biscotasi Lake
5251895 m N
FAUST
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HOLLINGER
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ARDEN
EDINBURGH
INVERNESS
HENNESSY
Biscotasing
HUBBARD
ABNEY
ELIZABETH
LILLIE
CHALET
PAUDASH
BREBEUF
BLEWETT
IRIS
KELSO
MCPHAIL
BAZETT
CAVANA
MARQUETTE
BAYNES
SHELLEY
FULTON
GLADWI
SPECHT
BREADNER
BATTERSBY
DUBLIN
ONAPING
5206594 m N
COMOXI
ETHEL
JASPER
ALTON
LAFLECHE
ATHLONE
MULDREW
FAIRBAIRN
Onaping Lake
383563 m E
436102 m E
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Kilometres
LEGEND
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Mafic and ultramafic metavolcanic rocks
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Migmatized supracrustal rocks
Coarse clastic metasedimentary rocks
Faults
Dikes
Lakes
N

Appendix C

Lake Sediment Analytical Data for Sample Depth, Loss-On-Ignition, Ag, Au, As, Co, Cr, Cu, Fe, Mn, Mo, Ni, REEs, S, Ti, Th, U, V and Zn

NOTE:

Depth	sediment sampling depth in metres
Total REEs	sum of the concentrations of La, Ce, Pr, Nd, Sm, Eu, Gd, Tb, Dy, Ho, Er, Tm, Yb and Lu
ICP-MS	inductively coupled plasma mass spectrometry
ICP-OES	inductively coupled plasma optical emission spectroscopy
INAA	instrumental neutron activation analysis
ND	not detected, below detection limit
INF	insufficient sample for analysis
NM	not measured, sample lost at lab

Site	Easting	Northing	Sample	LOI	Ag	Au	As	Co	Cr	Cu	Fe	Mn	Mo	Ni	REEs	S	Ti	Th	U	V	Zn
No	Method------------------->		Depth		ICP-MS	INAA	INAA	ICP-MS	ICP-MS	ICP-MS	ICP-OES	ICP-OES	ICP-MS	ICP-OES	IC-PMS	ICP-OES	ICP-OES	ICP-MS	ICP-MS	ICP-OES	ICP-MS
	Detection Limit------->			0.05	0.04	2	0.5	0.04	1	0.4	20	0.7	0.06	1		20	0.8	0.02	0.03	0.4	2
	Units-------------------->		m	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	(NAD 83 Zone 17)																				
1	437893	5260301	3	26.5	0.06	1	7.0	3.79	24.7	25.0	7318	190	0.77	13.0	99.4	4624	262	1.51	3.18	21.8	54.3
2	439715	5259350	2	33.3	0.06	1	5.5	6.32	22.4	21.3	6479	195	0.68	12.0	89.1	1097	233	0.91	3.77	17.6	54.6
3	451748	5259322	2	36.9	ND	1	10.0	5.78	31.9	20.2	5044	29	1.54	11.0	43.2	6505	199	1.88	2.46	19.4	34.8
4	450700	5259476	4	53.6	0.06	1	1.3	6.42	17.7	13.7	2908	52	0.73	11.0	42.2	6094	215	0.28	0.61	19.0	75.0
5	450605	5260140	3.5	58.2	0.05	1	1.4	5.12	16.7	10.2	2007	45	0.62	10.0	36.7	3238	220	0.19	0.49	10.8	51.2
6	448783	5259953	2	78.7	0.06	1	5.0	22.1	11.8	14.4	2162	88	1.88	7.0	19.4	3554	108	0.39	1.05	19.3	75.6
7	446378	5261363	2.5	82.3	0.04	INF	1.5	5.07	6.16	9.73	2904	72	1.23	6.0	8.2	6404	40	0.10	0.18	8.0	30.7
8	446149	5260921	10	46.5	0.10	1	INF	3.20	105	47.9	121894	1465	5.07	26.0	462	2895	245	21.23	4.84	>180	48.6
9	445077	5261709	NM	48.5	0.09	1	72.8	6.15	49.3	30.3	13742	248	7.07	14.0	78.6	2750	149	1.80	10.6	128	51.5
11	445677	5260082	7.5	35.6	0.07	1	38.0	5.04	35.3	22.9	7085	102	4.24	12.0	35.4	2996	125	0.97	5.08	63.9	45.5
12	444883	5259435	4	26.2	ND	1	29.0	ND	17.4	6.25	6853	77	2.02	11.0	26.9	3413	313	1.23	1.45	36.8	50.8
13	444603	5259125	5	64.7	0.05	INF	2.1	9.67	24.4	24.1	2774	21	5.47	8.0	26.9	2583	99	0.66	6.83	102	44.2
14	444453	5258690	2	69.3	0.07	1	10.0	3.66	14.0	14.3	2911	64	3.09	10.0	25.3	3200	134	0.88	1.51	21.0	106
15	444299	5259092	3	80.7	0.04	1	INF	9.27	14.1	9.17	1890	115	0.76	8.0	17.7	1399	113	0.03	0.20	8.6	79.2
16	444385	5259519	3.5	89.5	0.04	1	1.8	3.22	8.35	8.18	1653	126	1.56	5.0	15.4	6843	56	0.06	0.29	7.2	70.1
19	443349	5277573	3	29.2	0.06	1	5.5	9.07	21.4	18.0	6158	243	0.86	19.0	168	3647	170	0.36	3.20	20.8	53.4
20	439688	5259377	1.3	34.5	0.06	1	2.0	10.7	22.2	21.8	5763	202	0.81	12.0	90.3	2662	182	0.72	4.02	16.2	46.9
21	440513	5259957	1.4	56.0	0.09	1	2.0	10.5	39.1	64.6	15884	260	4.59	29.0	131	2073	155	3.88	7.07	49.6	84.7
22	441109	5261089	2	54.1	0.08	1	6.9	5.42	25.0	75.3	22433	319	6.60	23.0	62.4	4293	105	1.99	8.13	25.6	67.9
23	445007	5261556	12	52.9	0.09	1	22.0	6.84	44.6	33.9	17500	327	7.47	14.0	77.0	3421	147	2.14	8.31	139	50.6
24	451012	5264608	4.8	36.0	0.08	1	19.0	5.79	27.6	17.9	12747	323	0.64	19.0	88.9	1729	219	0.74	1.78	33.6	79.2
25	450251	5263954	3.3	40.4	0.08	1	59.2	6.38	28.5	20.9	13161	283	0.77	21.0	87.9	4995	216	0.62	2.18	33.5	79.6
26	450392	5263523	3.3	53.4	0.05	1	3.8	6.76	15.6	17.3	6195	181	1.32	12.0	53.6	3314	126	0.85	2.11	26.1	60.9
27	451452	5262798	3.4	55.0	0.06	1	4.6	10.2	26.9	19.5	13199	189	1.20	17.0	94.3	3998	185	2.55	2.22	53.7	87.9
28	441083	5262219	1.8	44.6	0.06	1	5.3	4.27	20.0	62.1	23111	353	7.59	23.0	51.2	5147	104	2.20	8.68	24.4	62.2
29	445526	5264824	10	29.3	0.10	1	6.4	3.27	31.8	32.6	17372	666	5.71	16.0	125	1758	227	2.81	4.14	121	59.4
30	450485	5266390	2	56.2	0.08	1	18.0	6.33	17.2	33.5	4158	59	2.33	12.0	48.5	3849	92	0.67	2.94	25.3	62.0
31	452198	5266952	9	27.3	0.09	1	39.0	9.74	33.1	23.0	14935	421	0.81	21.0	111	3938	193	0.59	1.22	38.4	91.3
32	451697	5266624	3	13.4	0.05	1	8.1	3.42	24.3	16.5	10465	332	0.52	19.0	83.3	2423	247	1.70	0.96	23.5	64.8
33	455778	5266791	1	54.6	ND	INF	1.1	1.81	5.23	14.6	2198	63	1.69	14.0	15.2	3603	48	0.34	0.40	8.7	35.8
34	455191	5266246	1	35.8	0.06	1	2.5	5.37	18.6	16.4	4955	125	0.64	15.0	97.5	1579	109	0.22	1.17	23.5	52.5
35	455358	5266885	3	17.4	0.05	1	1.9	3.24	25.3	11.7	14415	250	0.38	16.0	111	2394	269	1.42	1.11	33.4	76.1
36	453981	5266595	3	92.1	ND	1	INF	2.84	5.28	8.75	1668	92	0.55	5.0	14.0	2033	19	0.02	0.18	4.9	75.8
37	453534	5266398	0.5	70.5	0.05	1	2.4	4.60	13.1	26.5	3182	50	0.98	19.0	37.0	16080	79	0.58	0.59	12.6	36.1
38	455469	5265737	4	29.7	0.06	1	1.9	2.57	34.2	16.5	17109	351	0.60	19.0	109	2524	285	1.96	2.02	63.6	108
39	455318	5265065	4	39.2	0.08	1	0.8	9.69	33.0	17.4	15089	294	0.75	15.0	96.5	2397	195	0.70	1.95	76.9	98.1
40	454569	5264993	2	30.8	0.05	1	2.0	4.20	28.1	19.1	11066	295	1.13	15.0	77.9	4029	294	1.34	3.26	47.6	61.8
41	454483	5265479	4	50.6	0.31	3	2.4	3.07	70.6	101	132814	262	2.04	31.0	479	3440	199	8.02	3.28	>180	94.8
42	455109	5263828	5	63.9	0.07	1	8.7	6.16	16.5	20.9	9868	222	1.99	11.0	53.1	3619	118	0.32	1.76	58.4	97.4
43	457383	5269931	1	24.7	0.09	7	INF	0.71	20.3	17.1	4855	104	0.51	14.0	82.1	2963	132	0.13	0.91	12.5	44.3
44	457668	5269613	3	39.4	0.13	1	7.2	6.02	30.7	27.7	9596	168	0.81	19.0	153	1680	138	0.14	1.38	31.6	61.2
45	457945	5268610	2	32.5	0.11	1	10.0	7.40	38.5	33.1	22565	208	1.00	26.0	226	3306	194	1.39	3.20	54.3	79.6
46	458711	5267302	2	12.9	0.05	1	7.0	4.45	20.8	17.1	9676	164	0.66	16.0	109	1972	234	1.06	1.51	26.6	49.2
47	462138	5268115	2	50.3	0.07	1	3.8	20.3	10.9	23.4	1957	29	2.32	14.0	60.2	3120	80	0.45	2.66	12.8	31.1
48	460387	5265167	4	76.3	0.08	1	1.4	6.34	11.3	18.4	5386	145	1.57	12.0	47.7	7878	96	0.34	0.80	16.4	73.5
49	460574	5262419	1	54.6	0.04	1	2.2	11.2	14.5	12.5	5385	121	0.72	14.0	62.2	4385	114	0.49	1.42	12.7	47.3
50	459542	5262589	5	54.9	0.07	1	7.4	2.86	16.1	18.6	5011	120	1.03	14.0	59.6	1308	92	0.08	1.44	16.3	71.6
51	457228	5263718	2	81.4	0.11	1	1.7	2.07	8.94	26.0	1750	70	0.51	10.0	81.1	4399	67	0.07	0.86	11.9	42.7
52	457197	5264203	1	45.4	0.09	1	3.7	20.4	17.9	24.3	2553	56	1.09	11.0	69.9	3183	177	0.57	2.65	12.7	73.8
53	456690	5265009	1	55.4	ND	1	1.7	3.07	11.5	16.7	2162	37	1.27	12.0	29.6	3014	49	0.77	1.73	15.6	42.7
54	455179	5261916	5	65.7	0.06	1	2.9	10.4	17.5	21.0	7415	165	1.29	11.0	52.3	3097	72	0.04	0.68	38.6	64.8
55	452959	5262447	5	52.5	0.06	1	3.1	3.20	10.1	16.7	5532	96	1.01	11.0	29.1	4832	141	0.53	0.53	10.6	59.9
56	450242	5261568	4	76.6	0.07	1	1.6	1.87	9.22	11.1	1686	93	1.02	7.0	17.8	4195	75	0.03	0.26	12.9	86.8
57	447670	5262639	4	82.7	0.04	INF	5.3	1.85	14.4	8.65	1674	67	0.61	7.0	14.7	3385	65	NM	0.21	11.8	51.2
58	446424	5261302	1	72.4	ND	1	1.6	8.45	5.29	8.20	2939	40	1.26	7.0	12.3	4630	50	0.12	0.15	7.9	24.9
59	445828	5262074	2	89.2	0.08	1	6.1	2.35	14.2	20.1	1064	88	1.06	10.0	31.9	5683	128	0.30	0.31	10.3	100
60	445764	5262477	9	65.2	0.08	1	2.3	9.41	23.3	19.2	76998	603	1.20	16.0	119	6805	99	3.01	0.72	84.8	87.9
61	430782	5248642	0.5	29.2	0.07	1	1.5	1.45	21.6	18.5	6636	142	0.46	16.0	111	1451	145	0.27	1.09	16.3	56.1
62	429048	5244430	8	57.8	0.15	1	1.4	7.81	27.8	30.3	14982	412	1.25	17.0	168	2149	141	0.12	0.68	60.8	59.5
64	426123	5234746	10	73.7	0.13	1	INF	9.14	10.7	30.0	7268	150	1.85	10.0	102	3927	64	0.05	1.00	29.6	51.1
65	420349	5230539	3	42.2	0.12	1	2.8	5.69	39.8	43.5	20367	438	2.64	32.0	283	2499	248	4.22	17.9	48.8	90.2
66	414007	5223940	3	49.6	0.10	1	1.9	5.74	22.9	28.8	11637	177	3.64	17.0	330	4416	163	1.50	6.39	27.0	74.7
68	403008	5214386	13	46.2	0.13	1	8.7	8.40	28.7	39.7	10713	185	1.95	16.0	216	4166	125	0.44	9.90	37.0	80.9
69	397819	5212440	4	35.1	0.13	1	0.9	6.54	27.1	28.6	10859	182	1.22	17.0	368	4673	157	0.63	12.5	27.5	72.9
70	398318	5208250	6	48.5	0.16	1	1.9	4.62	24.5	28.5	9743	131	1.13	15.0	283	4739	160	0.37	3.59	38.6	51.4
71	397878	5208951	11	38.8	0.14	2.5	1.6	3.55	38.5	32.8	20444	321	2.10	18.0	476	2558	216	1.33	9.18	50.1	107
72	397604	5209775	16	45.1	0.14	1	1.6	9.66	28.9	27.8	13681	325	1.45	16.0	395	3107	165	0.65	10.4	50.8	72.3
73	398766	5212768	6	40.4	0.14	2	2.7	3.52	30.4	27.7	11079	160	0.94	17.0	392	3339	181	0.81	11.6	32.6	65.2
74	397589	5210490	5	35.3	0.09	2	7.2	1.36	26.7	27.7	11346	218	1.62	18.0	364	2427	171	0.71	11.3	29.8	75.6

Site	Easting	Northing	Sample	LOI	Ag	Au	As	Co	Cr	Cu	Fe	Mn	Mo	Ni	REEs	S	Ti	Th	U	V	Zn
No	Method------------------->		Depth		ICP-MS	INAA	INAA	ICP-MS	ICP-MS	ICP-MS	ICP-OES	ICP-OES	ICP-MS	ICP-OES	IC-PMS	ICP-OES	ICP-OES	ICP-MS	ICP-MS	ICP-OES	ICP-MS
	Detection Limit------->			0.05	0.04	2	0.5	0.04	1	0.4	20	0.7	0.06	1		20	0.8	0.02	0.03	0.4	2
	Units--------------------->		m	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	(NAD 83 Zone 17)																				
75	398077	5210781	1	43.6	0.10	1	3.8	5.85	16.1	18.4	3320	35	0.88	18.0	178	1857	137	0.06	6.46	11.2	38.0
76	398472	5211591	15	48.9	0.20	1	2.5	2.04	26.1	31.2	11618	352	1.67	17.0	308	2149	212	0.33	9.09	53.9	65.2
77	398762	5211960	9	42.7	0.15	1	2.1	4.94	29.2	27.1	9770	193	1.12	16.0	337	3426	231	0.47	10.2	35.1	64.5
78	397653	5211548	6	38.0	0.11	1	2.0	6.87	30.7	29.5	12577	193	1.19	19.0	375	3175	234	0.81	12.1	33.5	68.8
79	397186	5208834	9	44.9	0.14	1	2.3	9.87	25.4	23.6	14553	309	1.16	17.0	356	1905	188	0.39	6.17	42.9	60.9
80	396188	5209322	4	37.4	0.10	1	0.5	1.64	23.9	17.8	8062	125	0.90	15.0	263	2235	261	0.63	4.49	24.7	43.7
81	395801	5209803	7	36.1	0.10	1	2.6	2.26	24.5	18.4	10575	186	1.01	17.0	302	2685	237	0.65	5.10	30.3	50.6
82	395470	5210340	5	39.7	0.11	1	2.1	7.51	27.3	21.3	9689	148	1.18	20.0	314	2702	263	0.60	5.27	29.0	53.4
83	393157	5208443	4	38.1	0.10	1	1.5	3.59	20.5	21.6	6836	73	0.83	14.0	246	2843	172	0.18	4.38	27.8	38.1
84	393817	5208563	4	58.1	0.15	1	1.9	2.95	8.89	30.2	6115	48	2.58	12.0	141	4429	84	0.02	2.74	19.2	69.5
85	394316	5208152	5	42.6	0.09	1	2.2	10.8	11.5	20.0	2250	44	1.54	10.0	141	2733	96	N.I	4.17	12.7	34.1
86	394216	5207402	15	46.9	0.16	1	1.5	3.77	23.4	25.1	14838	463	2.13	17.0	273	3035	184	0.42	3.67	58.3	56.3
87	395267	5208648	4	34.7	0.10	1	1.6	5.52	15.7	16.8	7335	70	1.51	15.0	171	8739	216	0.27	3.56	23.0	54.5
88	395139	5209607	8	34.7	0.12	1	1.8	2.71	30.9	21.7	21731	341	1.69	22.0	362	6738	333	1.37	5.71	47.5	74.8
89	395469	5210949	4	56.6	0.16	1	1.3	6.21	10.4	50.1	6470	106	3.25	14.0	129	4162	109	0.04	5.69	23.7	119
90	395948	5210997	2	48.4	0.10	1	1.5	2.47	11.7	25.8	5112	70	1.73	12.0	120	2111	150	0.09	3.77	18.3	52.3
91	395824	5211734	2	43.4	0.97	1	1.3	4.12	47.9	>500	21637	159	0.78	>150	185	2222	274	0.84	3.70	29.5	133
92	395397	5211917	4	66.8	0.13	1	1.3	4.28	26.2	28.3	6360	72	0.98	19.0	196	6309	221	0.40	9.01	19.1	78.2
93	396043	5212295	2	46.5	0.10	1	1.3	4.71	20.1	27.2	3655	56	0.83	21.0	299	4310	156	0.25	13.7	15.4	45.4
94	394821	5210921	7	39.3	0.13	1	1.0	2.63	26.1	20.3	10348	164	0.86	18.0	262	3395	258	0.47	4.78	32.9	65.7
95	394887	5211853	9	42.8	0.18	1	3.2	3.92	27.9	23.9	12237	280	1.22	18.0	273	1959	245	0.77	6.39	55.5	57.2
96	395061	5215213	3	32.1	0.13	1	2.1	7.25	22.9	32.2	5163	43	4.42	17.0	291	10881	161	0.48	16.1	26.2	78.4
97	394338	5219552	3	45.0	0.13	1	2.1	6.07	18.4	32.5	5609	61	7.99	12.0	187	3618	112	0.03	8.81	37.6	57.2
98	394354	5222323	4	43.7	0.13	1	1.0	2.79	22.1	33.5	12359	106	1.26	13.0	325	3825	191	0.66	21.2	49.5	41.0
99	395419	5224880	0.5	51.8	ND	1	2.0	2.41	5.12	9.25	2375	35	0.82	6.0	82.1	4025	62	1.25	7.80	4.3	24.2
100	397046	5227909	3	45.5	0.10	1	2.1	4.01	14.1	21.4	3086	48	1.02	14.0	160	2203	108	0.07	8.18	16.1	47.7
101	394415	5229968	4	62.7	0.11	1	1.8	2.89	17.2	26.0	10218	130	1.20	14.0	148	2125	80	0.07	4.24	41.7	112
102	396617	5235260	3	52.2	0.09	1	1.9	4.11	15.3	19.7	8399	135	1.34	15.0	275	2914	96	0.06	3.20	30.3	48.3
103	396786	5235905	4	56.6	0.08	1	1.5	3.19	6.33	21.3	7553	80	1.85	10.0	133	8204	56	1.02	2.76	14.9	45.1
105	396166	5240777	4	57.8	0.23	1	1.5	3.56	21.3	49.7	9343	121	3.16	16.0	361	2276	155	0.36	6.05	89.3	107
106	396955	5226975	5	32.6	0.12	2	2.7	2.09	30.8	23.3	14204	254	1.13	20.0	362	2943	258	1.47	14.5	45.1	90.6
107	394253	5226212	7	37.6	0.17	3	1.1	6.56	41.7	32.6	49088	415	1.69	27.0	652	3221	278	11.32	33.3	79.4	107
108	394026	5227978	4	37.4	NM	3.5	2.0	4.82	NM	NM	43093	260	NM	25.0	270	2930	354	NM	NM	156	NM
109	394028	5228962	2	32.8	0.11	2.5	2.4	6.04	35.4	26.7	41759	234	1.09	26.0	520	7091	380	13.08	29.9	54.2	81.0
110	390697	5226629	14	38.5	0.12	2.5	2.0	2.75	35.1	33.0	20781	320	6.77	20.0	503	4315	234	2.70	56.6	39.5	98.5
111	387152	5225803	7	35.9	0.23	4	0.9	17.2	27.1	39.9	15304	67	1.94	18.0	1020	2478	185	5.81	73.3	50.2	50.4
113	385130	5219429	13	26.3	0.07	1	1.2	2.73	22.6	21.1	9516	273	1.70	18.0	180	6945	258	3.76	20.0	21.6	59.1
114	387013	5219140	9	69.9	0.18	1	1.5	1.79	14.5	40.8	4702	102	4.06	16.0	194	2784	106	0.08	4.56	50.6	149
115	387495	5219309	10	36.0	0.18	1	1.2	10.3	19.9	22.7	8205	121	2.38	13.0	238	3101	157	0.43	12.7	37.8	51.3
116	386083	5214957	2	41.0	0.12	1	0.9	7.27	41.4	49.0	23662	277	1.67	48.0	389	3598	249	5.79	19.0	36.7	143
117	386460	5213715	11	37.4	0.10	1	1.6	5.42	17.1	27.8	3684	46	1.01	19.0	142	2857	137	0.10	7.65	20.0	52.1
118	386648	5213730	7	63.7	0.25	1	1.5	22.2	36.8	47.0	16758	205	1.94	28.0	268	3726	154	0.42	10.3	58.7	123
119	386171	5212780	5	50.7	0.13	1	1.3	3.83	19.4	21.7	6970	80	0.85	15.0	269	4082	110	0.06	4.71	33.2	48.2
121	386173	5211988	7	43.6	0.07	1	0.9	2.32	11.3	15.0	3043	47	0.61	10.0	126	6468	96	0.05	6.00	10.5	25.8
122	386735	5211897	6	51.8	0.17	1	2.4	6.85	17.9	21.2	8676	91	1.19	16.0	199	3816	157	0.14	9.73	31.5	42.7
123	387060	5211552	7	47.3	0.19	1	2.3	3.83	28.9	25.8	11101	184	1.50	19.0	305	5122	213	0.31	19.3	49.5	54.4
124	388104	5211406	8	19.3	0.08	1	4.0	7.16	34.1	17.9	21083	348	1.32	25.0	192	2334	418	4.65	14.1	35.8	87.2
125	388963	5210164	19	16.2	0.09	1	3.7	2.55	34.7	18.6	42839	1446	2.48	29.0	304	5011	406	6.47	14.9	56.3	112
126	387070	5211530	9	55.8	0.29	1	3.5	2.01	31.7	32.4	33285	347	1.98	21.0	415	4651	197	0.96	20.7	79.0	53.3
127	385993	5210804	24	38.6	0.21	1	2.6	7.09	36.6	26.9	21951	777	1.69	23.0	416	3877	318	2.15	8.72	74.5	95.1
128	386533	5209624	14	33.3	0.13	1	2.0	5.35	40.8	24.8	19320	369	1.19	26.0	355	3023	377	2.95	8.03	51.4	85.1
129	386426	5210031	8	70.0	0.12	1	2.1	5.71	12.5	32.0	6177	135	1.87	14.0	169	1967	69	0.05	2.69	21.7	85.7
130	387389	5210012	3	42.3	0.11	1	2.3	8.05	15.4	22.0	3512	65	0.79	13.0	208	3087	107	0.06	3.64	16.2	34.7
131	387966	5209492	1	18.9	0.05	1	1.8	2.82	25.8	12.7	8208	228	0.58	15.0	229	8616	295	1.41	5.88	22.4	47.5
132	390435	5208259	8	42.2	0.14	2	2.8	11.5	29.4	35.8	7494	150	1.12	17.0	450	3100	189	0.84	17.2	26.0	71.1
133	390010	5208513	5	35.2	0.15	1	3.2	11.5	35.8	28.4	29695	197	1.73	23.0	565	3013	242	4.84	10.3	68.9	98.2
135	392204	5208722	3	48.1	0.10	1	0.6	9.87	14.3	18.4	4124	39	1.10	15.0	235	5422	92	0.13	8.82	11.4	50.8
136	391621	5209077	3	49.0	0.08	1	3.0	5.07	9.59	21.4	5090	67	1.52	9.0	128	2666	75	0.22	4.21	8.9	36.2
137	392070	5209389	11	37.1	0.12	1	1.6	20.6	25.5	23.4	14353	281	1.18	16.0	292	1759	171	1.19	6.48	39.0	68.3
138	391386	5209928	4	19.2	0.06	1	1.2	4.36	22.7	16.1	12214	159	0.95	17.0	231	2392	327	4.81	6.26	21.0	65.0
139	391092	5210286	7	48.6	0.20	2.5	3.0	8.33	16.5	36.2	9323	79	1.85	11.0	745	1106	160	2.43	14.5	20.2	71.3
140	390480	5209566	5	36.6	0.14	1	1.7	2.09	28.8	23.0	16143	235	1.08	17.0	330	5087	269	2.29	7.38	53.0	61.7
141	393419	5216257	4	58.7	0.18	1	3.7	1.58	13.2	48.0	10124	127	28.4	15.0	262	4329	83	0.18	28.8	38.6	114
142	394273	5216108	5	76.6	0.17	1	2.2	15.6	9.46	46.0	4295	63	10.3	14.0	107	4036	79	0.17	3.04	13.4	105
143	434914	5253306	7	20.2	0.06	1	2.2	24.1	28.5	13.1	14893	288	0.52	14.0	83.9	2747	180	0.75	1.24	49.9	47.6
144	430655	5245595	7	32.8	0.11	1	3.9	5.78	21.9	18.5	7914	272	0.68	12.0	121	3080	145	0.11	0.64	27.2	56.7
145	425428	5238321	4	35.5	0.11	1	5.4	4.98	37.4	38.3	15865	441	1.40	27.0	202	3571	181	0.85	1.98	33.3	82.5
146	417861	5231753	6	46.0	0.15	1	2.4	3.63	37.6	43.2	27696	387	1.30	18.0	389	6649	237	3.89	2.17	88.0	89.2
148	411703	5221877	7	14.4	0.06	1	1.3	21.8	30.8	20.4	21900	372	1.00	21.0	173	1239	376	5.18	4.96	28.8	60.2

Site	Easting	Northing	Sample	LOI	Ag	Au	As	Co	Cr	Cu	Fe	Mn	Mo	Ni	REEs	S	Ti	Th	U	V	Zn
No.	Method------------------>		Depth		ICP-MS	INAA	INAA	ICP-MS	ICP-MS	ICP-MS	ICP-OES	ICP-OES	ICP-MS	ICP-OES	IC-PMS	ICP-OES	ICP-OES	ICP-MS	ICP-MS	ICP-OES	ICP-MS
	Detection Limit------->			0.05	0.04	2	0.5	0.04	1	0.4	20	0.7	0.06	1		20	0.8	0.02	0.03	0.4	2
	Units--------------------->		m	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	(NAD 83 Zone 17)																				
149	408808	5218432	2	87.1	0.05	1	1.5	3.75	5.82	8.26	5937	228	1.22	6.0	26.7	6371	67	0.47	1.44	7.4	20.1
150	404975	5215959	0.5	39.8	0.12	1	1.0	3.09	32.1	67.8	4911	14	3.44	20.0	127	2162	101	1.73	31.9	37.7	54.5
151	405143	5215564	1	69.0	0.06	1	3.0	10.8	17.7	23.7	8078	95	14.3	14.0	68.9	3503	98	2.12	5.43	20.9	78.3
152	404997	5214894	0	13.5	0.11	1	2.7	4.91	32.3	106	4918	43	0.93	15.0	122	3360	385	2.91	8.32	17.0	23.7
153	403907	5213368	0.5	59.1	0.12	1	1.6	14.0	18.9	25.0	6714	87	1.21	14.0	104	4839	138	0.08	4.79	21.1	67.0
154	403744	5212318	4	50.0	0.13	1	1.1	1.70	6.61	20.6	4212	66	1.59	9.0	63.3	1971	79	0.04	2.52	8.2	46.3
155	404303	5212134	14	47.6	0.21	2.5	1.5	5.04	19.6	39.0	>135000	3136	3.09	29.0	542	3127	128	5.73	5.39	66.9	49.6
156	404672	5211973	20	50.1	0.11	1	2.1	4.86	17.4	26.6	8009	298	1.64	13.0	69.8	3205	184	0.61	3.96	25.0	60.9
157	405745	5209828	3	50.6	0.12	1	1.3	4.23	16.9	21.3	6510	37	1.55	17.0	364	3053	102	0.12	15.2	22.9	55.0
158	406047	5209950	11	60.7	0.24	1	1.8	4.72	16.4	42.4	12200	66	6.60	17.0	307	3587	106	0.19	25.2	38.8	67.6
159	404684	5209241	7	17.1	0.10	1	1.1	3.53	27.3	19.4	16601	218	1.21	16.0	292	4689	232	2.85	18.4	28.7	51.0
160	404494	5208535	9	20.2	0.11	1	2.6	6.10	31.2	23.3	18211	256	1.58	18.0	354	2865	206	2.61	22.1	31.8	62.4
161	403528	5209509	3	57.0	0.06	1	1.7	3.56	20.5	23.6	7582	111	3.53	18.0	103	2374	215	3.34	6.94	15.5	62.5
162	403614	5210260	12	49.5	0.14	1	0.9	5.72	25.9	29.3	10781	364	2.62	17.0	170	2244	168	0.60	13.0	49.3	64.8
163	401582	5208374	4	32.5	0.11	1	1.6	5.90	27.5	19.0	13948	122	0.83	15.0	325	3511	242	1.00	3.16	43.3	51.6
165	401892	5209315	2	32.8	0.09	1	2.9	6.87	12.0	13.1	4032	29	0.76	11.0	124	2964	131	0.09	4.89	13.7	24.0
166	400788	5209948	1	44.4	0.10	1	3.4	5.93	15.0	18.1	2814	42	0.69	18.0	212	2363	124	0.15	7.70	11.3	30.1
167	400449	5209855	2	50.0	0.11	1	2.5	3.15	12.0	18.2	2470	37	0.75	12.0	121	3620	123	0.14	4.96	10.2	28.5
168	400229	5208833	4	46.7	0.15	1	2.0	5.62	20.3	23.8	6718	72	0.56	14.0	167	6424	181	0.20	3.84	15.2	32.0
169	399213	5208262	4	33.5	0.08	1	5.2	7.46	13.3	15.9	4742	41	0.40	16.0	104	3344	313	0.45	1.96	13.7	32.0
170	398669	5208691	7	53.6	0.14	1	5.6	8.41	16.7	23.8	6448	59	0.76	15.0	143	3112	72	NM	1.96	17.4	57.0
172	399881	5209606	4	41.1	0.13	1	1.4	4.60	17.4	18.4	5539	63	0.55	12.0	130	2823	216	0.26	3.45	12.4	26.3
173	399702	5209920	3	39.9	0.12	1	1.7	2.79	13.2	18.0	4622	50	0.57	12.0	122	3373	162	0.11	3.21	11.2	30.1
174	400099	5211188	1	35.1	0.11	1	1.9	7.93	19.6	18.0	6096	73	0.48	17.0	196	2736	229	0.31	5.24	15.0	44.4
175	400241	5211670	1	51.2	0.14	1	27.0	2.66	17.0	26.4	2320	44	0.63	20.0	141	4483	102	NM	3.98	13.2	61.1
176	400527	5212282	5	55.5	0.15	1	2.4	5.69	27.5	33.0	6294	78	1.21	20.0	336	4566	120	0.23	8.35	21.0	93.0
177	401361	5211428	3	25.8	0.10	1	1.7	5.74	25.6	18.3	10320	129	0.68	16.0	320	3317	235	0.82	7.03	24.9	67.8
178	401477	5211849	4	30.8	0.12	1	2.4	4.37	31.3	21.8	12395	176	0.84	20.0	283	3802	248	0.83	8.75	28.0	63.5
179	401467	5212416	3	29.5	0.11	1	2.0	3.80	28.8	21.0	10228	168	0.85	18.0	250	4169	225	0.68	8.73	22.8	66.4
180	402660	5211846	7	37.4	0.16	1	1.7	13.7	29.0	22.4	16361	243	0.89	13.0	314	3748	214	0.66	9.41	57.0	55.0
181	402236	5212669	9	43.0	0.19	1	4.6	26.4	36.4	26.9	22174	324	1.20	20.0	397	3110	293	1.19	9.34	87.7	72.5
182	402724	5213757	5	78.7	0.07	1	4.8	4.88	18.1	13.3	24767	161	1.91	11.0	34.2	9942	93	0.42	0.27	32.3	>150
183	400954	5216447	2	37.8	0.14	1	1.0	3.83	24.8	29.7	12334	260	2.03	18.0	344	2250	164	0.46	15.5	36.0	83.4
184	400580	5217512	4	37.1	0.15	1	1.7	3.33	33.0	34.3	14465	203	1.63	19.0	374	4357	159	0.65	13.1	40.1	65.0
185	400825	5220861	5	33.0	0.14	1	1.8	2.05	15.1	22.0	4227	53	1.35	10.0	107	2200	119	0.06	15.9	14.1	28.3
186	401123	5223715	5	63.2	0.14	1	1.9	3.85	17.0	40.4	6015	85	1.43	13.0	173	900	77	0.03	8.51	32.3	78.2
187	399483	5225959	3	31.3	0.16	1	1.4	6.26	18.1	22.9	8162	80	1.73	11.0	171	2812	129	0.27	10.2	21.3	39.2
188	400110	5226242	2	40.3	0.09	1	0.9	8.95	28.0	9.15	2177	47	0.70	16.0	55.6	3054	182	0.12	1.45	11.6	46.5
189	400190	5229639	3	61.9	0.10	1	1.5	9.32	8.25	19.3	2756	57	1.75	10.0	53.8	1285	59	0.45	5.51	6.9	49.7
191	400421	5235593	5	51.4	0.11	1	0.9	0.61	20.5	19.9	6390	166	2.03	13.0	286	3461	103	0.11	9.77	36.1	41.4
192	399680	5238324	1	40.2	0.08	1	0.7	7.14	14.5	17.1	3017	72	1.56	15.0	129	3161	64	0.02	4.72	12.4	46.8
193	396410	5242659	5	52.4	0.17	1	1.3	13.0	10.7	48.4	6718	94	3.79	12.0	89.4	4717	106	0.20	2.13	20.8	82.3
194	394782	5245524	5	53.7	0.16	1	1.9	1.37	18.1	29.0	5586	94	1.04	13.0	171	2385	79	0.03	2.05	18.8	66.6
195	394752	5245826	12	50.1	0.15	1	1.5	7.25	28.0	36.9	6643	149	1.16	15.0	197	3615	191	0.35	3.72	23.8	73.9
196	394796	5246450	14	70.1	0.17	1	1.2	15.3	11.6	35.5	8327	226	2.20	12.0	114	3903	79	0.08	1.62	16.4	106
197	394898	5246617	6	47.1	0.41	3.5	1.5	6.13	70.8	65.9	>135000	443	2.61	38.0	1087	2496	317	34.41	10.7	>180	83.6
199	397494	5232867	3	22.5	0.07	1	1.5	23.6	14.1	32.8	10221	249	2.66	15.0	105	2280	237	4.27	21.8	14.9	32.2
200	396979	5230098	6	18.7	0.09	1	1.5	4.18	28.8	18.2	29215	459	1.21	17.0	287	1558	279	7.28	23.1	41.3	66.2
201	401535	5227933	3	35.0	0.12	1	1.6	7.04	22.3	41.9	8664	389	2.72	16.0	203	3336	241	2.44	28.9	30.5	76.7
202	402479	5224377	13	51.4	0.13	1	1.7	3.87	20.9	17.1	39549	1491	1.38	22.0	245	4903	197	0.63	9.51	63.3	52.0
203	403754	5221553	5	68.3	0.12	1	3.3	4.84	19.6	18.9	3606	110	1.45	12.0	41.1	2131	99	0.03	0.47	21.3	112
204	405571	5221828	1	53.2	0.12	1	3.5	1.88	20.9	13.2	8816	410	1.22	12.0	80.0	6916	165	0.12	4.48	17.9	53.2
205	408292	5216232	1	66.4	0.07	1	2.8	6.09	21.0	13.3	12067	121	0.93	13.0	68.2	4179	99	0.96	2.09	31.1	64.2
207	408038	5209833	8	41.8	0.23	1	0.6	5.15	20.5	26.0	10744	112	2.15	15.0	249	2233	173	0.18	9.09	42.8	39.7
208	408290	5210310	5	54.9	0.10	1	1.5	6.36	17.3	21.7	4272	109	1.46	15.0	100	5020	67	0.11	4.10	15.4	60.1
209	408112	5211369	14	63.7	0.21	1	1.6	5.51	16.3	55.3	13992	95	2.31	15.0	139	1700	95	0.07	4.38	35.0	71.9
210	409584	5211193	7	66.7	0.14	1	1.6	3.92	15.3	24.0	5896	111	1.67	12.0	84.0	3106	56	0.02	3.73	27.7	48.7
211	412191	5210823	5	21.0	0.06	1	1.6	9.26	15.4	11.9	4215	43	0.59	12.0	130	2560	151	0.44	7.34	12.7	26.3
212	411321	5211528	2	18.5	0.11	1	2.1	1.19	23.4	10.0	8671	133	0.42	15.0	145	2942	195	0.26	9.73	18.3	36.3
213	411111	5212798	1	59.9	0.14	1	2.0	7.78	16.5	17.6	10667	262	0.89	17.0	182	5671	126	0.19	13.5	19.2	64.8
214	411345	5213851	2	17.8	0.08	1	2.0	6.78	23.8	7.83	7666	103	0.30	13.0	182	2352	191	0.31	13.6	16.8	28.1
215	412363	5214837	6	70.4	0.11	1	1.9	7.09	14.0	17.4	3858	100	0.99	11.0	90.3	2565	59	NM	1.75	18.4	67.0
216	410723	5214494	2	59.9	0.13	1	1.8	2.61	19.1	17.3	7950	213	0.98	14.0	114	3017	107	0.10	7.17	13.7	55.5
217	410869	5215812	3	24.5	0.07	1	2.0	2.19	15.1	9.27	6199	111	0.58	10.0	89.5	3909	153	0.40	6.89	12.1	33.1
218	410211	5216595	6	13.1	0.06	1	7.7	5.14	17.4	11.0	9724	145	0.60	12.0	77.8	5897	273	2.34	1.44	16.3	32.3
219	409519	5217012	2	60.7	0.09	1	2.4	5.71	14.0	14.2	2380	30	0.85	10.0	71.4	2579	93	0.10	0.85	13.5	40.8
220	411249	5216803	3	64.0	0.07	1	2.4	5.58	13.2	10.3	3399	109	0.83	7.0	128	4415	93	0.11	10.3	10.4	8.5
222	411229	5218381	7	20.2	0.10	1	2.7	4.80	39.0	19.2	20325	361	0.77	26.0	156	2796	565	3.95	2.91	37.4	64.6
223	411353	5220873	4	19.4	0.09	1	3.3	4.59	37.9	24.1	26417	352	2.00	26.0	218	3029	665	4.87	7.31	47.1	78.6

Site	Easting	Northing	Sample	LOI	Ag	Au	As	Co	Cr	Cu	Fe	Mn	Mo	Ni	REEs	S	Ti	Th	U	V	Zn
No	Method------------------>		Depth		ICP-MS	INAA	INAA	ICP-MS	ICP-MS	ICP-MS	ICP-OES	ICP-OES	ICP-MS	ICP-OES	IC-PMS	ICP-OES	ICP-OES	ICP-MS	ICP-MS	ICP-OES	ICP-MS
	Detection Limit------->			0.05	0.04	2	0.5	0.04	1	0.4	20	0.7	0.06	1		20	0.8	0.02	0.03	0.4	2
	Units--------------------->		m	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	(NAD 83 Zone 17)																				
224	412372	5223050	1	56.9	0.08	1	2.8	1.25	10.3	20.3	3241	53	3.85	13.0	94.2	3047	100	1.35	4.45	10.7	50.1
225	412743	5223154	2	52.6	0.10	1	2.7	9.99	20.4	20.5	9222	128	1.50	16.0	169	2763	293	0.96	4.19	27.5	55.1
226	413534	5223719	11	60.6	0.13	1	2.4	6.28	14.1	20.2	13484	417	4.20	10.0	188	4059	83	0.62	3.27	22.6	55.0
227	412915	5224475	10	61.7	NM	1	2.6	3.10	NM	NM	9144	429	NM	12.0	59.5	3242	101	NM	NM	24.3	NM
228	413633	5224701	4	63.9	0.23	1	1.9	8.68	9.48	32.2	3427	49	4.75	10.0	159	4336	69	0.09	3.81	12.6	53.3
229	413454	5225109	5	52.5	0.21	1	2.9	6.37	18.5	45.5	17095	396	7.64	17.0	385	1961	123	0.54	5.21	44.7	59.1
230	414017	5226664	6	32.7	0.12	1	1.6	4.87	27.8	20.2	11270	161	1.07	20.0	203	2506	264	1.08	6.25	25.4	60.3
231	414088	5231773	6	16.7	0.10	1	1.5	4.12	30.0	16.6	24157	570	1.70	20.0	194	5028	336	3.68	6.34	35.7	95.3
232	414877	5232908	5	23.1	0.09	1	1.8	2.54	35.3	41.9	21398	600	1.97	27.0	142	5312	646	5.32	8.71	36.8	70.9
233	415664	5233237	4	49.1	0.14	1	3.6	5.38	21.1	27.7	7147	110	1.00	17.0	124	3310	205	0.13	1.56	31.0	60.8
234	413823	5233854	3	36.9	0.15	1	1.3	2.76	28.0	41.3	16290	505	1.10	21.0	241	3133	168	0.27	3.67	39.4	107
235	412914	5234275	6	27.5	0.13	1	2.1	3.51	30.5	21.5	19130	371	0.90	21.0	189	4126	323	0.90	3.68	37.9	88.0
236	413024	5235990	3	29.2	0.12	1	3.5	4.49	32.3	22.2	16994	329	1.03	23.0	191	3076	312	0.91	3.69	33.4	85.6
237	413354	5242006	2	37.6	0.09	1	2.1	11.4	15.0	18.3	3671	38	0.65	21.0	85.5	4699	98	0.02	0.78	10.9	35.2
238	414433	5242440	1	39.7	0.10	1	2.5	3.30	19.1	20.5	3873	49	6.33	14.0	93.5	2866	128	0.05	0.97	14.9	34.0
239	429377	5254259	1	49.9	ND	1	1.6	8.28	9.51	9.42	2377	27	1.57	13.0	34.3	3067	53	0.56	1.99	9.0	33.1
241	433290	5250245	5	36.9	0.12	1	1.5	5.75	29.6	23.3	10160	268	0.51	18.0	127	1909	202	0.28	1.23	30.6	72.8
242	431813	5245459	1	52.6	0.11	1	2.3	17.4	29.6	43.3	4169	130	1.62	20.0	192	3961	82	0.05	1.15	25.7	83.7
243	430216	5241170	2	30.2	0.10	1	2.4	6.19	33.8	22.2	12726	219	0.56	23.0	135	2299	228	0.73	0.97	30.3	70.9
244	426178	5238091	2	48.6	0.15	1	2.8	7.26	33.6	36.8	8142	153	1.28	21.0	169	2109	198	0.16	1.83	31.9	62.8
245	425469	5237457	1	38.3	0.09	1	2.0	1.92	24.4	24.0	7120	118	1.32	21.0	150	7032	148	0.20	3.53	21.0	50.4
246	425765	5234057	9	47.3	0.11	1	3.7	3.44	22.3	21.8	11084	276	1.74	16.0	140	3864	268	0.47	2.03	29.7	59.6
247	422574	5232950	4	43.3	0.17	1	3.0	9.46	35.3	39.6	13218	263	1.31	26.0	179	2675	297	0.83	2.21	38.0	108
248	419541	5229742	4	32.4	0.09	1	1.6	1.87	30.8	17.6	16508	239	1.14	20.0	226	3553	317	0.93	7.34	36.7	68.3
249	415611	5227578	7	30.9	0.09	1	3.3	5.55	26.6	16.6	10712	178	1.09	17.0	212	3012	284	0.75	8.03	27.0	55.5
253	404545	5218080	10	59.1	0.15	1	2.7	3.25	18.6	29.0	6028	110	1.00	13.0	160	6505	109	0.04	5.82	31.0	37.2
254	399039	5217766	3	57.9	0.18	1	2.8	3.12	20.9	28.7	22089	105	1.28	12.0	527	2385	153	0.87	6.02	133	56.9
255	399561	5217052	1	34.2	0.08	2	INF	4.28	34.2	59.9	17779	170	3.20	28.0	360	2846	356	7.50	22.9	56.4	94.8
256	399175	5216769	9	41.0	0.18	1	4.2	4.96	42.3	42.0	34065	437	3.44	20.0	472	3319	214	2.06	20.9	67.5	123
257	398450	5216078	7	41.5	0.14	1	1.7	2.93	30.9	38.7	11230	222	2.04	17.0	335	3009	177	0.46	15.2	36.9	82.0
258	397922	5216618	7	45.3	0.19	1	3.0	5.78	27.8	40.0	7566	168	1.82	14.0	422	2247	180	0.29	12.7	46.0	74.5
259	397597	5216220	21	58.8	0.47	2.5	4.7	3.00	36.6	46.1	22376	617	3.12	18.0	589	3402	260	0.96	27.5	88.6	68.6
260	398022	5215921	13	45.6	0.26	1	2.6	6.57	33.8	44.1	15438	435	2.82	16.0	477	3476	245	0.71	27.8	59.1	74.0
261	398374	5215674	4	45.1	0.15	INF	3.0	5.63	25.0	34.0	7074	111	1.53	16.0	241	3727	161	0.18	17.3	26.2	72.7
262	398050	5215296	6	48.0	0.19	1	2.6	6.75	27.9	37.4	7567	195	2.40	17.0	292	3966	193	0.22	10.3	25.6	79.9
263	397469	5214845	6	37.3	0.16	1	1.6	1.98	30.3	30.3	8600	146	1.99	18.0	230	4616	250	0.54	6.32	27.9	71.3
264	397537	5213984	2	52.1	0.13	1	1.5	4.61	18.2	26.6	2670	47	1.54	23.0	131	2450	118	0.23	11.5	10.4	57.6
265	397191	5213348	13	42.9	0.22	1	7.0	9.76	22.1	26.9	15613	413	1.64	16.0	247	4418	162	0.34	8.60	47.1	69.3
266	395464	5214700	6	36.1	0.12	1	1.9	9.86	26.6	23.8	7604	110	1.33	15.0	233	3942	275	0.81	5.65	28.5	59.5
267	395557	5214018	8	42.8	0.14	1	2.7	4.00	37.6	36.6	13338	286	2.84	25.0	278	4550	301	1.48	15.6	40.8	87.7
268	396007	5214522	2	46.4	0.08	1	3.0	5.12	9.75	23.1	2556	41	1.98	10.0	71.2	2711	78	0.04	3.24	9.5	33.0
269	396353	5213404	5	49.9	0.19	1	2.6	13.3	11.9	27.2	5128	57	1.16	11.0	112	4549	91	0.03	5.68	13.4	57.4
270	395521	5212932	1	31.5	0.07	3	2.3	7.28	16.9	14.0	4822	62	0.68	14.0	97.4	4366	246	0.54	5.40	11.3	34.0
271	395011	5212885	4	43.1	0.13	1	2.6	6.92	22.6	34.5	5348	144	1.28	19.0	362	1759	178	0.30	10.5	19.1	75.3
272	394218	5212063	9	42.8	0.14	1	1.3	1.59	29.4	29.8	10542	275	0.97	18.0	369	3428	225	0.58	7.64	33.1	89.7
273	394216	5211386	3	26.9	0.09	1	3.4	4.85	31.4	18.7	13777	202	0.84	21.0	306	3776	321	1.46	5.39	24.6	82.7
274	393772	5212843	3	22.6	0.09	1	2.4	6.07	37.6	19.2	22125	215	1.15	25.0	354	3167	389	4.33	8.67	34.9	88.8
275	393154	5212781	2	37.2	0.11	1	1.1	4.65	25.4	23.7	8231	112	1.54	19.0	335	2416	156	0.21	9.22	23.6	66.2
276	393100	5211763	4	24.7	0.11	1	1.9	7.28	37.8	20.3	23767	259	1.69	24.0	357	3533	458	3.74	8.60	39.8	92.2
277	392336	5211321	19	43.7	0.24	1	2.2	2.16	36.3	28.9	16686	393	2.15	20.0	404	2025	301	1.13	9.41	76.6	85.9
278	391729	5211055	21	40.4	0.08	1	2.1	6.88	10.9	16.9	5630	50	0.99	12.0	256	3164	118	3.54	5.58	23.4	24.2
279	394040	5215633	1	36.4	0.09	1	3.0	14.8	14.4	19.0	3642	30	1.28	13.0	226	2534	135	0.78	8.82	15.9	22.4
280	394107	5214231	8	39.9	0.20	1	1.3	2.28	29.7	29.4	13134	134	2.91	17.0	363	3193	215	0.80	12.0	50.4	62.1
281	393297	5214313	1	29.6	0.10	2.5	3.0	6.39	18.9	20.1	3674	22	3.09	15.0	566	10058	135	1.30	100.0	14.0	42.2
282	392897	5214009	3	28.6	0.11	1	2.5	6.53	29.7	21.1	12713	91	2.04	23.0	420	4487	225	1.96	18.0	30.2	79.7
283	392592	5213017	11	51.6	0.28	1	2.8	4.35	32.0	36.1	26161	180	4.49	20.0	483	6344	185	1.51	19.9	102	66.0
284	391730	5213027	2	18.6	0.05	1	2.3	4.04	25.6	20.6	8525	137	1.57	19.0	209	3071	344	4.11	17.1	19.8	51.6
285	392111	5212433	18	32.1	0.18	1	INF	3.06	29.1	33.5	41022	692	3.75	20.0	382	2496	236	4.57	18.6	79.9	59.4
286	391510	5212460	3	23.1	0.08	1	1.6	3.45	27.0	20.8	10303	184	1.50	20.0	198	5617	399	3.08	16.4	23.3	48.7
287	393221	5217267	3	45.3	0.12	1	2.0	1.46	18.3	30.2	3939	56	1.98	14.0	124	3162	136	0.19	8.26	15.0	41.2
288	393194	5216832	3	39.5	0.10	1	2.8	3.67	14.6	22.2	3155	47	4.90	11.0	123	3608	123	0.10	7.13	17.0	31.9
289	397274	5220052	2	37.6	0.10	1	2.7	7.56	12.7	22.7	3919	63	1.38	12.0	86.5	4103	164	0.17	8.12	9.3	54.2
290	396323	5219987	4	50.8	0.17	1	0.5	1.81	27.6	42.1	6791	60	2.78	24.0	506	2001	148	0.50	30.2	21.7	67.9
291	395810	5219651	1	28.5	0.09	1	2.6	9.62	14.1	23.9	1970	20	0.96	16.0	269	2781	84	0.51	26.6	8.1	16.8
292	395102	5218753	2	60.5	0.09	1	0.9	2.18	12.1	26.9	2205	59	1.79	10.0	201	3035	57	0.06	34.9	9.7	38.6
293	394256	5218282	1	38.8	0.14	1	1.1	8.32	18.1	31.2	5798	52	1.76	19.0	326	3038	103	0.12	33.4	22.1	46.7
294	394184	5217375	5	44.9	0.19	1	1.1	2.04	25.9	33.0	5286	76	1.95	17.0	215	1978	113	0.10	12.2	25.5	55.2
295	395037	5227787	6	35.7	0.16	1	2.1	7.46	22.4	26.6	4653	77	1.31	15.0	316	5254	168	0.97	19.8	23.4	60.6
296	396016	5232744	7	22.5	0.09	1	2.0	7.59	36.5	20.4	37459	447	1.78	22.0	333	2874	397	7.77	25.4	51.8	87.9

Site No	Easting	Northing	Sample Depth	LOI	Ag	Au	As	Co	Cr	Cu	Fe	Mn	Mo	Ni	REEs	S	Ti	Th	U	V	Zn
	Method------------------->				ICP-MS	INAA	INAA	ICP-MS	ICP-MS	ICP-MS	ICP-OES	ICP-OES	ICP-MS	ICP-OES	IC-PMS	ICP-OES	ICP-OES	ICP-MS	ICP-MS	ICP-OES	ICP-MS
	Detection Limit------->			0.05	0.04	2	0.5	0.04	1	0.4	20	0.7	0.06	1		20	0.8	0.02	0.03	0.4	2
	Units------------------->		m	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	(NAD 83 Zone 17)																				
297	396355	5237801	3	32.3	0.08	1	1.0	2.15	18.4	17.6	6558	88	0.88	12.0	170	2892	161	0.36	4.53	24.0	44.4
298	396503	5236989	3	38.8	0.07	1	2.0	9.06	19.5	17.4	5424	86	1.09	15.0	136	1699	196	0.54	4.91	16.0	39.1
300	397603	5239394	3	25.5	0.08	1	1.3	7.53	28.1	45.3	16176	322	3.11	25.0	205	14660	260	1.47	24.8	28.9	78.9
301	397703	5238734	4	28.5	0.12	1	1.9	0.96	34.8	30.2	13034	406	1.69	20.0	331	8627	150	0.64	18.8	34.1	109
302	396250	5231540	12	29.7	0.12	1	2.3	17.3	31.2	22.1	19278	268	1.52	18.0	333	4390	181	2.75	23.0	41.0	79.8
303	395001	5230963	2	45.7	0.11	1	1.3	8.78	15.0	31.5	4809	58	2.94	15.0	137	3013	74	1.40	11.3	18.9	71.2
304	394475	5229243	1	76.3	0.09	4	1.9	4.55	16.8	23.0	1691	30	0.84	14.0	172	5145	98	0.42	21.0	8.5	26.9
305	393792	5229053	6	56.3	0.16	1	1.0	2.53	17.7	31.9	7872	118	1.46	14.0	273	5062	93	0.20	9.93	36.1	89.0
306	392254	5226882	5	46.9	0.14	1	1.8	2.73	14.4	21.6	3711	47	1.28	13.0	168	4483	88	0.09	22.2	20.2	48.4
307	391661	5227373	5	48.3	0.08	1	1.1	14.8	13.0	23.8	2671	40	2.75	14.0	228	3088	117	1.61	28.5	9.8	51.8
308	392867	5226112	5	44.2	0.09	1	0.3	4.95	9.55	24.9	2046	30	0.94	14.0	213	3480	58	0.28	18.8	6.9	43.0
309	392718	5225845	1	41.5	0.10	1	1.8	5.53	19.3	23.9	9125	44	1.04	16.0	407	6058	114	0.76	14.9	42.4	61.7
310	392351	5225290	4	46.9	0.17	2.5	1.5	6.56	40.0	72.0	69735	265	5.92	33.0	572	2153	249	18.31	47.8	71.3	114
311	392333	5224712	4	48.7	0.10	1	1.3	21.1	17.4	16.5	3445	53	2.18	12.0	59.1	2585	175	0.25	7.59	21.0	75.4
312	390881	5223895	1	32.0	0.07	1	2.1	2.44	13.4	17.3	3710	36	1.85	13.0	362	5473	99	0.92	43.3	15.7	43.4
313	388287	5224322	5	41.2	0.12	1	1.2	1.90	12.0	26.1	4748	44	1.30	15.0	194	4391	70	0.21	43.8	15.3	65.0
314	389053	5223314	2	64.0	0.15	2	1.8	3.43	36.6	60.3	35326	118	8.02	25.0	616	5665	148	13.72	74.6	30.3	>150
315	388653	5222272	5	39.8	0.13	1	0.8	4.14	21.7	30.2	6914	157	2.07	17.0	331	3043	132	0.54	51.5	19.7	60.6
316	388022	5222004	11	25.7	0.13	1	0.7	3.98	34.6	28.7	36525	685	4.01	22.0	430	2287	184	5.23	63.4	41.6	120
317	386580	5220985	21	22.8	0.12	1	1.3	20.3	35.5	29.2	56011	1655	2.73	29.0	377	6129	463	14.32	45.7	48.0	111
318	388770	5219998	11	52.0	0.36	1	1.7	11.1	23.8	40.2	21694	273	3.58	17.0	375	5784	204	0.99	25.2	69.9	62.1
319	388292	5218120	5	49.7	0.17	1	0.3	3.96	15.9	25.6	4893	59	5.40	13.0	140	2604	106	0.04	10.7	20.1	58.7
320	387491	5218085	3	30.5	0.16	1	0.8	5.42	24.0	18.7	6512	85	2.26	16.0	127	2086	254	0.68	8.37	19.1	59.4
321	387515	5217285	6	56.4	0.19	1	1.1	5.56	20.9	29.5	10431	185	2.05	21.0	207	4486	117	0.09	15.3	33.7	72.9
322	387381	5216475	1	25.0	0.11	1	1.5	2.78	25.3	21.4	8822	134	2.21	24.0	203	2949	295	1.69	15.3	27.2	76.2
323	388251	5215925	2	27.9	0.09	1	1.2	2.35	22.9	22.2	8202	122	3.36	20.0	211	7488	170	0.64	14.3	30.4	79.4
324	388931	5215749	3	28.3	0.09	1	2.1	7.23	29.9	24.7	13273	295	1.42	24.0	252	3288	286	4.36	21.7	26.3	95.3
325	389375	5216255	5	34.9	0.07	1	1.2	31.7	20.7	23.2	7225	113	1.77	21.0	218	3201	175	1.74	19.6	15.5	70.9
326	390822	5219229	8	33.6	0.09	1	1.9	2.77	13.3	19.2	6098	79	3.43	14.0	211	4677	83	0.25	15.5	26.2	50.2
327	390686	5217980	6	33.7	0.12	1	5.8	7.03	21.4	28.9	14109	288	10.5	15.0	275	693	92	0.36	21.4	26.2	111
328	391170	5217117	9	56.0	0.11	1	3.6	4.90	22.6	30.2	8032	156	3.21	19.0	227	3300	115	0.29	17.0	22.9	69.2
329	390214	5216990	7	18.4	0.08	1	3.0	9.20	31.5	18.9	15890	240	1.46	22.0	228	3494	431	4.31	14.2	29.9	75.8
330	390580	5215882	6	16.6	0.07	1	6.2	6.26	32.5	17.7	18928	309	1.28	21.0	245	3716	494	6.66	16.7	32.6	76.7
332	390692	5214695	6	18.4	0.09	1	1.7	4.53	35.7	24.2	19175	328	2.02	23.0	311	3707	493	6.97	22.1	38.7	82.9
333	391504	5214109	10	23.3	0.11	1	1.5	2.29	31.3	23.0	19066	264	2.18	19.0	273	12338	247	3.77	18.8	39.4	86.8
334	393134	5218642	1	35.2	0.07	1	1.9	20.5	11.7	18.3	3418	40	1.12	11.0	98.7	1869	83	0.12	11.2	7.2	27.1
335	392706	5220777	1	25.3	0.07	1	1.5	3.17	18.3	11.9	8669	127	0.70	11.0	134	4698	205	1.50	11.0	21.8	51.9
336	391583	5221694	4	44.0	0.10	1	1.3	18.1	15.0	18.1	4713	67	0.76	11.0	117	2312	94	0.16	5.65	15.3	51.2
337	390693	5221209	1	40.1	0.13	1	1.7	9.78	18.1	24.8	2714	35	0.79	14.0	176	3051	154	0.50	10.5	11.5	67.1
338	389722	5221546	6	54.0	0.19	2	3.2	11.7	30.6	39.4	56976	344	1.98	19.0	657	4555	118	7.12	33.4	74.1	75.5
339	389516	5222141	9	60.9	0.20	1	7.5	2.53	13.7	23.6	8354	100	1.12	13.0	116	3378	100	0.15	9.73	26.4	96.3
340	389072	5221354	8	63.4	0.18	1	2.6	4.96	23.0	36.9	9151	52	2.16	17.0	291	6796	133	0.26	38.6	53.5	77.2
341	388460	5220562	4	38.9	0.15	1	1.9	8.07	15.4	22.4	7710	50	0.90	12.0	210	903	117	0.37	15.4	28.3	48.3
342	388363	5220876	2	41.6	0.09	1	1.5	5.48	7.47	28.5	3236	23	1.63	12.0	264	4553	51	3.59	26.0	8.4	34.8
343	394018	5224894	2	41.2	0.07	1	3.5	4.39	18.5	14.7	9472	135	1.17	12.0	279	2914	82	3.41	20.4	26.0	60.2
344	425467	5248853	10	67.1	0.31	1	2.7	6.23	11.3	49.7	2958	102	2.31	9.0	91.2	2815	46	0.06	0.71	18.8	54.4
345	428131	5251118	2	30.7	0.09	1	2.7	8.11	19.6	15.2	4376	66	0.48	12.0	71.5	2637	114	0.06	0.57	16.1	48.3
346	428163	5250656	1	42.5	0.11	1	4.0	2.94	18.6	23.2	2022	39	0.60	17.0	79.6	3363	52	NM	0.65	11.6	51.1
347	445339	5262780	6	47.4	0.08	1	2.2	3.33	14.9	29.5	4742	105	4.83	9.0	30.4	4606	68	0.58	4.38	15.6	94.9
348	445208	5262513	13	56.8	0.12	1	4.3	4.04	54.0	33.2	14524	406	7.74	14.0	98.9	2722	125	1.56	11.2	>180	62.1
349	445741	5263122	1	40.1	0.05	1	3.1	2.20	22.3	8.67	7171	397	0.93	12.0	44.8	5682	203	0.91	0.39	18.2	52.3
350	446508	5263381	2	76.3	0.06	1	3.8	5.44	21.7	25.9	3535	63	3.15	15.0	50.0	6365	135	1.21	1.06	17.2	101
351	445633	5264011	10	61.5	0.16	1	3.3	5.13	46.4	48.1	15360	668	8.01	18.0	239	2693	173	4.99	11.1	>180	80.7
352	446321	5264678	10	64.7	0.12	1	2.8	15.2	11.7	28.1	6151	166	1.49	11.0	57.4	2295	54	0.04	0.43	29.7	81.9
353	449331	5265610	0.5	53.2	0.06	1	2.9	2.77	9.38	15.2	4272	60	2.46	7.0	67.5	2328	53	0.72	2.29	37.1	57.5
354	452815	5268099	8	45.8	0.13	1	1.9	3.08	32.2	40.1	11880	314	1.65	22.0	158	3472	114	0.19	2.53	29.2	87.8
355	452165	5269591	5	46.1	0.13	1	1.3	9.96	19.2	33.5	5440	110	1.19	15.0	106	4136	72	0.03	1.10	26.7	56.1
356	453455	5271173	6	50.9	0.21	1	4.7	0.42	24.2	58.7	4883	98	1.28	14.0	206	3123	85	0.05	1.87	22.7	59.7
357	455336	5272063	5	65.7	0.21	1	2.2	1.94	25.5	55.9	13674	269	1.97	17.0	146	2102	104	0.12	1.03	47.6	70.8
358	454837	5271915	3	53.2	0.13	1	1.8	3.17	27.4	42.2	4431	93	1.51	22.0	134	5031	90	0.09	1.32	15.7	59.4
359	454420	5271817	1	50.2	0.09	1	2.3	9.49	19.3	29.3	3840	83	1.18	19.0	92.1	5580	81	0.13	1.08	12.5	30.7
360	453987	5271622	7	52.3	0.20	2	18.0	2.15	46.2	47.3	19878	575	1.33	18.0	369	4768	165	0.97	1.94	131	95.9
361	454198	5270228	3	42.7	0.14	1	2.7	9.28	49.0	41.1	35543	218	1.08	21.0	438	5278	179	3.56	2.11	>180	86.1
362	454098	5269322	4	40.7	0.12	1	2.9	4.30	27.8	34.2	8746	189	0.66	16.0	133	10414	213	0.39	1.58	35.8	55.3
363	454010	5268945	2	53.9	0.09	1	0.8	6.32	26.9	46.5	5836	88	1.56	24.0	187	1864	134	0.92	1.84	20.9	48.5
364	453874	5268761	3	60.3	0.10	1	1.2	6.69	14.4	41.3	3047	93	1.56	16.0	76.6	7374	52	0.11	1.33	12.5	70.4
365	455498	5268453	5	40.2	0.11	1	2.4	8.09	31.0	26.4	9438	327	1.01	16.0	165	4567	98	0.17	2.05	27.8	82.1
366	455099	5267932	7	49.9	0.14	1	1.6	6.55	36.6	28.0	18962	528	0.83	14.0	208	3870	101	0.38	1.76	94.4	95.3
367	454282	5267711	3	49.4	0.14	1	3.3	8.53	79.6	36.1	55628	393	0.77	21.0	501	2306	235	4.34	2.73	>180	79.7

Site	Easting	Northing	Sample	LOI	Ag	Au	As	Co	Cr	Cu	Fe	Mn	Mo	Ni	REEs	S	Ti	Th	U	V	Zn
No	Method------------------>		Depth		ICP-MS	INAA	INAA	ICP-MS	ICP-MS	ICP-MS	ICP-OES	ICP-OES	ICP-MS	ICP-OES	IC-PMS	ICP-OES	ICP-OES	ICP-MS	ICP-MS	ICP-OES	ICP-MS
	Detection Limit------->			0.05	0.04	2	0.5	0.04	1	0.4	20	0.7	0.06	1		20	0.8	0.02	0.03	0.4	2
	Units---------------------:		m	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	(NAD 83 Zone 17)																				
368	456175	5269995	0	54.8	0.15	1	6.3	3.99	10.2	19.9	2169	124	1.28	9.0	73.7	1802	53	0.04	1.30	7.4	30.1
369	456331	5269022	0.5	73.4	0.10	1	3.1	6.99	7.84	15.6	2991	57	0.69	9.0	55.0	4522	34	0.22	1.11	7.7	22.8
370	457032	5268878	5	79.2	0.08	1	1.3	3.63	12.5	25.3	4452	161	1.72	11.0	63.1	3255	53	0.03	0.88	24.1	108
371	456725	5269358	2	32.7	0.07	1	1.6	8.59	15.4	15.9	4180	88	0.80	12.0	68.8	3098	97	0.03	1.00	14.8	35.7
372	457304	5270316	16	47.8	0.23	1	2.1	7.32	33.9	42.3	13160	523	1.40	18.0	174	3750	128	0.05	1.42	52.7	74.9
373	457689	5271349	3	57.3	0.15	1	1.8	4.02	18.9	31.3	4860	69	0.88	16.0	115	7321	122	NM	0.94	22.9	60.2
374	458509	5271785	8	49.4	0.18	1	1.3	2.90	17.0	27.0	4580	114	1.12	14.0	92.4	2801	85	NM	0.76	21.0	54.1
375	459273	5273127	1	57.1	0.10	1	1.8	11.5	10.9	28.5	2258	66	2.28	15.0	41.9	7928	67	0.27	0.60	8.5	71.5
376	460740	5274602	10	58.7	0.32	1	7.7	4.77	29.3	67.4	14376	345	4.92	19.0	168	2288	98	0.04	0.70	49.3	85.9
377	459672	5274841	2	39.6	0.13	1	62.0	2.34	21.7	44.2	3580	82	2.53	16.0	91.6	3661	76	NM	0.59	11.5	44.3
378	459708	5276570	0.5	25.8	0.11	1	4.4	1.34	23.7	22.4	4414	44	0.27	15.0	123	2903	123	0.08	1.91	10.5	21.2
379	462180	5277414	8	54.1	0.26	1	6.9	2.10	31.0	76.1	12264	625	6.05	19.0	131	2552	107	0.07	0.67	34.9	87.9
380	462358	5279855	5	51.7	0.22	1	55.9	4.53	19.1	36.6	6836	90	0.99	14.0	143	3609	84	0.02	0.67	22.7	59.8
381	461556	5279279	2	52.3	0.07	1	2.1	4.41	8.52	29.0	1557	50	0.92	14.0	68.8	3375	52	0.43	0.75	6.3	40.5
382	459230	5278991	0.5	41.3	0.11	1	4.4	6.78	14.8	23.8	2929	34	0.49	10.0	85.3	3900	94	NM	1.29	9.0	13.1
383	457108	5277621	1	57.3	0.08	1	3.7	17.5	16.4	32.8	2638	69	1.96	19.0	43.4	3698	104	0.10	0.64	9.8	78.0
384	456061	5277209	3	34.6	0.09	1	1.9	3.43	26.8	24.0	10096	301	0.69	18.0	107	2389	185	0.29	1.08	26.1	88.3
385	455220	5277211	5	51.2	0.18	1	1.8	2.66	39.2	42.1	22288	389	1.54	21.0	297	6881	195	1.85	2.87	124	89.6
386	455411	5276790	4	74.2	0.06	1	1.5	6.77	12.3	16.6	2384	105	0.99	11.0	33.0	3553	82	0.08	0.45	12.1	76.2
387	455925	5276088	1	38.3	0.07	1	2.2	2.08	15.9	15.5	4850	66	0.66	15.0	59.0	4816	105	0.07	0.75	13.7	44.6
388	456346	5275798	1	26.8	0.08	1	2.2	4.53	27.9	15.8	7616	151	0.46	18.0	75.7	5294	215	0.56	0.70	15.8	64.0
389	457434	5276504	1	30.4	0.08	1	3.4	9.76	24.1	17.8	5654	130	0.74	15.0	70.3	2287	136	0.13	0.62	11.5	49.1
390	458912	5276688	1	41.1	0.11	1	3.1	7.09	18.0	36.8	3161	57	0.65	17.0	80.7	2684	65	0.02	0.73	12.2	44.0
391	458325	5275659	2	41.3	0.10	1	1.5	4.43	23.0	24.5	5388	114	0.58	17.0	79.1	2486	115	0.03	0.61	13.8	53.8
392	458185	5274957	3	37.7	0.18	1	1.8	2.28	30.5	30.8	10777	250	0.72	23.0	113	4073	199	0.24	0.79	27.5	96.4
393	458005	5273772	2	51.6	0.09	1	1.5	2.63	11.7	27.1	2799	76	1.20	17.0	50.8	2918	73	0.21	0.61	5.9	54.7
394	458195	5273605	0.5	79.3	0.12	1	2.2	7.42	7.37	28.0	2680	101	0.90	9.0	72.9	4050	60	0.30	1.11	6.9	30.4
395	457744	5272979	18	37.2	0.16	1	2.3	8.76	37.0	37.4	11567	387	1.29	20.0	178	7701	194	0.24	1.82	30.8	81.9
396	456380	5272194	7	34.3	0.14	1	4.3	2.55	35.5	39.0	15772	477	1.55	19.0	208	5379	193	0.34	1.67	44.3	90.0
397	456926	5271221	12	47.0	0.23	1	1.5	7.22	37.1	42.5	18927	556	1.33	18.0	229	5230	158	0.20	1.35	67.1	109
398	455642	5273561	12	43.0	0.20	1	2.4	7.30	38.2	42.5	11579	372	1.10	17.0	219	2683	149	0.13	1.37	47.6	87.3
399	454676	5273778	1	46.1	0.06	2	1.6	7.05	5.13	19.4	1292	46	1.73	9.0	34.8	2000	34	0.25	0.49	4.0	44.5
400	453946	5272696	1	51.6	0.06	1	1.3	6.49	6.88	31.8	890	24	1.89	14.0	49.1	2085	33	0.69	0.41	4.2	38.2
402	453958	5271637	6	33.7	0.14	1	1.4	6.40	45.0	37.2	67967	485	1.60	23.0	397	2809	307	7.26	1.67	158	125
403	452247	5270960	14	41.9	0.24	1	2.7	4.74	40.4	54.1	17192	498	1.53	19.0	259	9314	131	0.28	1.78	45.9	109
404	450739	5269445	1	55.7	0.08	1	1.8	6.93	17.8	30.1	4868	77	0.96	18.0	70.3	4602	150	0.17	1.68	11.6	35.9
405	451034	5269485	3	30.7	0.06	1	2.1	4.72	18.1	22.2	5313	84	1.04	15.0	64.3	4173	230	0.50	1.36	13.4	38.7
406	450094	5269350	1	40.2	0.05	1	4.2	5.45	17.7	23.1	4124	85	1.02	20.0	61.4	2125	93	0.16	1.00	10.1	39.8
407	447770	5266428	4	71.6	0.11	1	2.4	1.96	14.0	31.3	1937	89	2.38	11.0	52.5	3861	74	NM	0.47	16.7	84.8
408	446548	5270090	5	27.0	0.07	1	0.9	9.19	28.6	16.5	13555	513	0.58	15.0	106	2204	224	1.49	3.00	39.7	61.9
409	432606	5253875	2	45.3	ND	1	0.6	2.69	16.8	15.6	4065	91	0.58	13.0	47.0	3219	98	0.11	0.81	14.9	45.8
410	429132	5247460	2	34.9	0.06	1	2.0	7.87	19.1	17.4	3559	52	0.76	11.0	77.8	5307	143	0.13	0.66	15.5	60.4
411	430357	5242723	2	26.0	0.09	1	1.5	4.35	29.0	19.1	8181	106	0.62	18.0	98.2	3399	221	0.50	0.68	24.6	78.5
412	430827	5237962	9	36.4	0.15	1	1.5	3.21	34.5	30.0	22690	627	1.10	18.0	231	3227	161	0.47	1.60	81.4	93.5
413	429991	5234882	2	31.9	0.08	1	0.8	6.37	26.2	19.0	10328	155	0.58	19.0	101	2995	196	0.31	1.31	24.7	60.2
414	427795	5231870	2	11.2	0.04	1	2.1	12.5	27.8	9.23	11692	264	0.64	16.0	90.0	1819	426	1.61	1.10	25.5	49.4
415	425772	5229294	1	56.0	0.07	1	1.4	2.07	22.2	17.2	8754	44	1.53	21.0	160	3355	129	0.31	2.55	29.6	58.2
416	419880	5228132	10	42.5	0.13	1	3.0	4.91	26.2	18.8	15893	288	0.89	17.0	222	4657	161	0.36	6.62	37.2	60.3
417	416176	5226028	5	16.5	0.06	1	1.3	6.58	34.9	16.8	21184	349	0.61	20.0	185	3647	412	3.97	4.00	43.6	60.9
418	414496	5225079	3	50.0	0.08	1	1.8	3.37	21.3	19.3	9947	194	1.61	20.0	286	2148	158	0.60	8.55	15.6	60.1
419	411923	5224412	5	69.1	0.10	1	1.6	11.0	11.4	20.6	6469	120	3.77	12.0	141	3707	[illegible]	0.05	7.54	19.4	74.5
421	407260	5223557	5	35.9	0.10	1	1.5	2.53	34.8	21.2	20238	334	0.78	23.0	194	4383	192	1.20	7.08	27.7	108
422	406198	5223265	2	67.1	0.05	1	1.9	3.22	14.0	23.6	4354	56	2.83	12.0	58.7	5588	76	0.55	4.62	19.0	96.5
423	405829	5224544	12	46.5	0.16	1	3.1	4.08	33.8	24.9	15370	497	1.16	17.0	212	3059	178	0.26	9.43	55.0	70.1
424	404334	5225167	2	32.7	0.07	1	7.3	2.60	28.8	19.3	9596	124	0.86	21.0	116	1668	191	0.35	8.37	20.4	68.4
425	404409	5224549	1	29.9	0.05	1	4.6	10.3	21.6	22.2	5254	84	2.35	16.0	79.2	6498	243	1.13	9.52	19.0	72.9
426	404004	5223302	5	49.5	0.09	1	7.0	4.40	55.8	58.7	5788	44	9.46	13.0	44.8	2404	171	1.44	26.1	35.5	35.0
427	402631	5223143	4	17.1	0.06	1	3.5	3.36	34.4	19.7	13122	181	0.94	23.0	143	2152	404	2.84	6.31	27.4	59.5
428	402342	5222058	12	22.8	0.09	1	3.1	19.8	36.4	23.7	18731	307	0.97	22.0	189	2573	308	3.09	8.92	35.5	62.8
429	403840	5221295	2	78.8	0.06	1	2.6	4.50	12.3	11.8	2218	147	0.71	8.0	23.6	4662	113	0.07	0.28	10.3	112
430	402998	5220658	14	33.3	0.08	1	3.8	5.76	96.5	60.4	11125	148	3.95	13.0	87.2	2044	122	1.10	19.9	128	52.5
431	403718	5219042	3	44.7	0.17	3	1.1	2.90	42.9	26.9	117797	131	1.65	21.0	841	3367	172	9.85	4.00	>180	46.0
432	403523	5219057	5	64.8	0.13	1	1.1	5.34	15.8	32.2	4019	239	1.03	12.0	135	3993	69	0.08	2.64	14.7	65.1
433	403395	5219044	0.5	79.8	0.08	1	2.0	7.59	6.83	17.9	4225	74	0.59	6.0	60.5	8026	75	0.22	3.65	6.1	19.5
434	403298	5218847	5	58.7	0.10	1	11.0	2.03	16.1	22.1	10460	180	1.76	12.0	104	1722	81	0.12	3.61	24.6	64.8
435	403499	5218281	3	51.2	0.16	INF	3.0	7.85	28.5	31.0	19487	193	1.81	18.0	242	4692	111	0.70	3.41	111	62.5
436	403218	5217740	6	53.8	0.21	4	28.0	4.23	24.8	41.4	9205	152	2.48	20.0	191	2714	146	0.28	3.63	35.1	89.4
437	403187	5217340	1	70.7	0.09	1	2.4	9.56	9.15	22.9	3378	53	2.93	9.0	50.5	1995	44	0.74	1.83	9.3	68.1
438	403880	5217260	3	43.7	0.14	4	4.3	6.03	22.0	29.1	9898	108	0.97	18.0	153	3251	125	0.19	3.78	35.2	73.9

Site	Easting	Northing	Sample	LOI	Ag	Au	As	Co	Cr	Cu	Fe	Mn	Mo	Ni	REEs	S	Ti	Th	U	V	Zn
No	Method--------------->		Depth		ICP-MS	INAA	INAA	ICP-MS	ICP-MS	ICP-MS	ICP-OES	ICP-OES	ICP-MS	ICP-OES	IC-PMS	ICP-OES	ICP-OES	ICP-MS	ICP-MS	ICP-OES	ICP-MS
	Detection Limit------>			0.05	0.04	2	0.5	0.04	1	0.4	20	0.7	0.06	1		20	0.8	0.02	0.03	0.4	2
	Units--------------->		m	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	(NAD 83 Zone 17)																				
439	404917	5217064	4	61.2	0.15	1	2.3	4.59	13.0	32.2	5498	56	1.90	14.0	117	7215	103	0.03	13.2	26.2	107
440	400393	5214215	8	39.8	0.21	1	1.5	2.03	21.9	31.6	9572	207	1.43	12.0	355	3498	158	0.22	16.7	49.0	52.7
441	400825	5213824	11	55.5	0.23	1	2.9	7.49	20.1	34.3	15422	189	2.84	13.0	308	2978	141	0.22	14.6	47.2	57.0
442	400775	5214334	2	34.9	0.07	1	1.3	9.64	14.1	15.8	3959	46	0.97	13.0	153	2614	129	0.21	12.9	12.9	34.4
443	399506	5213481	10	50.6	0.23	1	5.8	3.84	30.3	38.4	7885	240	1.55	16.0	303	3791	282	0.62	12.1	52.8	74.6
444	400437	5213238	1	48.1	0.09	1	1.6	10.8	16.7	24.5	4496	101	1.44	21.0	224	3665	124	0.09	10.2	14.0	57.0
445	399645	5214642	3	51.0	0.17	1	1.5	8.64	14.9	34.0	7289	68	2.07	14.0	204	4143	93	0.04	9.41	40.2	75.5
446	399999	5215635	5	67.6	0.16	1	0.8	4.60	10.9	53.8	9617	90	3.03	11.0	283	3079	85	0.08	10.9	40.9	123
447	399528	5215771	3	35.7	0.10	1	1.8	3.97	9.98	23.3	2944	35	0.88	10.0	119	1667	108	0.12	8.12	8.5	34.5
448	399601	5219742	6	41.8	0.23	2	1.5	5.28	34.5	54.6	15391	213	2.26	18.0	514	2923	181	0.95	22.4	38.8	71.4
449	400145	5218904	2	40.1	0.19	2	2.4	3.76	34.9	50.3	23138	215	2.64	24.0	505	3271	185	3.36	25.6	37.0	84.2
450	397872	5218002	8	64.5	0.17	5	11.0	5.37	18.7	36.6	14136	210	1.27	18.0	221	3192	95	0.09	8.22	36.6	97.8
451	396526	5217910	3	34.1	0.10	1	1.8	8.36	18.9	32.0	5486	187	1.28	12.0	271	4275	108	0.16	15.8	23.1	42.4
452	396242	5217942	13	55.6	0.55	2.5	1.5	11.6	36.0	81.1	15711	150	2.70	17.0	634	4188	163	0.57	25.9	56.1	68.8
453	396573	5216753	7	48.7	0.17	1	1.3	3.56	24.4	35.6	7840	120	1.40	16.0	387	8832	151	0.26	25.1	25.0	60.9
454	396192	5216723	1	37.7	0.10	1	2.2	5.91	9.64	22.0	2724	39	1.66	11.0	100	3879	102	0.19	14.6	11.8	28.3
455	395373	5216288	4	48.6	0.34	2.5	2.6	2.95	34.1	58.2	17400	61	5.25	22.0	752	5880	141	1.47	34.5	150	82.9
456	395538	5217256	0.5	36.0	0.15	2	1.8	5.25	23.0	41.1	5471	27	1.45	18.0	658	3094	84	0.34	35.2	27.9	37.7
457	394286	5218305	1	39.3	0.14	1	2.3	4.08	17.9	33.7	7527	56	2.01	20.0	325	3664	113	0.13	33.7	24.6	51.5
458	399186	5220795	3	44.6	0.14	1	2.4	3.03	19.4	45.0	3740	44	2.04	18.0	233	3546	141	0.45	22.9	19.2	50.7
459	400064	5228102	1	61.9	0.08	1	2.0	7.47	16.3	19.2	1510	31	1.62	9.0	168	3421	189	0.42	21.4	11.8	73.9
460	400411	5228569	2	41.5	0.11	1	0.9	6.04	15.6	27.7	4147	42	1.74	14.0	306	2928	101	0.88	34.3	28.2	48.2
461	398734	5232081	2	48.3	0.10	4	24.0	4.47	14.5	27.5	2727	49	1.02	14.0	207	2834	84	0.21	18.1	6.6	48.4
462	399177	5234053	3	28.9	0.07	5	INF	2.69	24.6	17.7	8212	163	0.93	16.0	185	2704	192	1.51	13.6	15.6	55.9
463	399379	5237247	8	43.9	0.16	1	2.9	2.45	25.0	24.6	7599	221	2.30	14.0	186	4827	111	0.16	5.64	36.6	76.1
464	400051	5236573	10	61.7	0.19	2	1.5	8.12	24.0	40.8	26568	457	4.79	21.0	547	3382	120	1.09	8.24	56.0	78.4
465	397144	5239698	2	44.1	0.12	1	3.1	14.4	17.3	24.6	3723	68	1.01	15.0	174	6129	81	0.06	7.95	11.6	41.6
466	396365	5239565	4	62.2	0.12	1	1.9	2.18	13.3	25.0	4579	109	1.65	12.0	180	3411	80	0.03	4.53	15.5	61.8
467	397724	5237843	9	56.6	0.13	1	1.6	6.79	13.9	22.1	3309	82	1.75	11.0	132	9749	69	NM	6.23	17.7	76.1
468	397703	5236959	3	49.2	0.12	1	2.1	12.3	20.7	24.4	8858	88	2.88	16.0	142	2744	86	0.13	7.10	31.0	59.4
469	395956	5234657	4	42.2	0.15	1	12.0	6.69	28.8	35.6	27598	312	2.17	22.0	314	1716	259	4.37	8.14	49.9	78.4
470	396354	5234072	3	25.4	0.06	1	1.3	1.65	19.9	31.5	11765	239	2.32	17.0	150	1294	234	4.79	27.5	21.9	48.6
472	400293	5234281	15	48.4	0.22	1	1.9	6.93	22.1	35.6	12951	323	2.18	17.0	337	1989	138	0.36	7.82	50.1	64.8
473	400382	5233696	3	36.0	0.10	1	1.1	5.87	18.6	20.0	5714	75	1.15	17.0	156	2862	98	0.11	6.39	18.0	52.9
474	400337	5232755	3	33.5	0.09	1	15.0	8.24	25.7	19.5	12033	310	1.02	18.0	224	2322	161	1.31	18.1	21.4	69.3
475	399961	5232726	2	32.2	0.09	1	3.1	4.18	26.8	18.8	11658	335	1.05	18.0	235	5644	145	1.24	18.6	21.4	75.7
476	399025	5230417	5	50.9	0.12	1	1.3	6.67	17.5	26.5	4731	62	1.97	16.0	210	1834	89	0.11	25.6	17.3	56.8
477	397789	5228748	3	45.0	0.10	1	1.6	12.2	18.3	28.4	7922	174	2.41	18.0	265	3230	105	0.59	28.0	19.9	56.9
478	399459	5228339	5	38.4	0.13	2	1.6	5.68	26.5	50.2	9041	102	3.84	19.0	625	2206	85	0.59	45.6	31.0	108
479	398501	5228729	3	32.4	0.08	1	2.2	1.14	10.1	27.6	3788	46	1.11	12.0	253	5961	85	0.23	19.5	12.1	30.6
480	398805	5228483	4	35.3	0.15	1	INF	3.97	18.1	42.1	5434	81	1.93	10.0	443	2786	95	0.21	26.9	31.7	52.7
481	397164	5227297	5	25.0	0.09	1	3.4	8.95	23.2	16.4	8390	158	0.94	13.0	228	6210	206	1.11	10.6	24.2	70.7
482	396756	5224904	3	39.3	0.15	1	1.6	12.1	21.0	20.6	12676	327	1.13	13.0	260	3821	144	0.68	11.9	48.1	52.0
483	396845	5223558	10	38.8	0.16	1	1.8	6.11	23.2	20.1	10322	275	1.42	12.0	279	3712	141	0.68	12.7	55.6	56.8
484	397949	5221796	7	27.4	0.12	1	1.4	3.45	25.1	18.9	10561	163	1.01	13.0	224	2744	176	1.37	12.9	34.8	55.8
485	401579	5220172	7	40.3	0.10	1	1.9	2.83	25.8	22.6	5718	61	1.20	15.0	202	3745	110	0.13	23.8	21.3	54.2
487	400242	5223170	3	36.4	0.08	1	2.4	4.30	15.8	30.8	3928	108	1.25	15.0	160	2933	97	0.07	24.8	14.8	39.4
488	399107	5225389	7	46.7	0.16	1	1.1	5.37	28.4	33.7	7837	182	1.91	17.0	277	2340	126	0.31	12.1	31.7	68.3
489	401751	5224530	3	78.4	0.09	INF	1.5	4.04	5.52	16.0	1184	45	0.95	14.0	11.6	1141	28	NM	0.69	7.7	137
490	400623	5224872	4	39.7	0.06	1	2.1	3.25	14.3	14.6	3505	44	1.15	11.0	129	4615	149	0.89	9.76	15.0	32.9
491	400500	5225298	3	37.2	0.11	1	1.6	2.86	26.8	33.4	9142	293	2.71	21.0	271	3069	141	0.93	20.9	25.4	87.4
492	400685	5226531	3	35.9	0.11	1	1.6	2.10	27.7	37.3	7951	219	2.84	18.0	301	3842	140	0.93	23.6	33.0	80.2
493	401242	5230118	4	29.1	0.11	1	1.7	12.5	30.5	20.2	14480	276	0.97	19.0	249	2826	187	1.46	14.4	27.8	76.1
495	404706	5228920	2	80.2	0.08	1	0.6	3.44	8.03	10.6	6002	296	1.00	7.0	52.7	12286	72	0.37	4.20	9.0	32.9
497	406259	5226170	6	46.9	0.13	1	2.0	5.34	30.5	26.6	12404	332	1.49	17.0	183	3910	182	0.35	9.29	35.1	69.3
498	406984	5224558	7	52.8	0.10	1	3.2	3.74	27.6	31.4	12445	170	2.36	18.0	169	4875	128	0.21	6.83	30.1	83.0
499	406940	5221832	2	75.9	0.09	1	2.2	1.52	14.3	18.2	7427	312	1.50	11.0	94.0	4015	113	0.26	7.45	18.8	43.7
500	407048	5220439	2	69.7	0.08	1	1.1	12.9	17.5	18.1	7365	243	0.90	10.0	157	3170	98	0.10	12.9	22.6	32.7
501	407571	5222892	6	44.2	0.11	1	2.6	7.26	33.2	37.9	17633	320	2.83	25.0	158	3035	233	2.09	7.03	22.8	106
502	408034	5223560	5	37.1	0.11	1	1.7	9.10	32.4	33.3	23142	642	2.31	26.0	179	2500	290	2.56	7.25	29.2	114
503	426297	5253079	5	31.8	0.10	1	1.0	2.47	30.9	19.1	7596	169	0.51	15.0	147	4162	124	0.15	1.04	16.6	73.6
505	425300	5253355	9	27.7	0.11	1	2.3	3.65	31.5	19.8	14884	491	0.71	18.0	175	3224	131	0.27	1.14	27.0	115
506	425804	5253511	4	48.7	0.18	1	1.8	4.87	29.6	26.1	7699	329	0.75	15.0	155	2266	122	0.09	1.12	38.5	88.4
507	434979	5255625	10	47.5	0.13	1	1.1	8.86	26.5	27.2	25322	126	2.98	17.0	110	5902	246	1.04	3.96	106	81.5
508	430203	5250141	4	41.4	0.12	1	1.9	2.61	27.4	26.0	8729	198	0.65	17.0	143	1490	154	0.13	0.80	24.3	66.9
509	429778	5245754	11	40.3	0.14	1	1.1	5.50	27.1	22.8	9399	286	0.80	16.0	137	2073	193	0.19	0.77	36.4	55.1
510	431122	5241587	4	49.4	0.11	1	1.4	2.04	21.4	20.6	6177	110	0.73	14.0	104	4718	98	0.03	0.65	26.4	36.2
511	431018	5237803	9	33.5	0.12	1	1.1	6.74	41.7	35.0	17319	454	1.30	18.0	233	3682	231	0.57	1.82	61.3	103
512	426666	5231498	9	43.5	0.18	1	1.8	9.10	37.1	49.0	31904	605	1.90	21.0	319	2771	163	1.76	4.12	61.9	101

Site	Easting	Northing	Sample	LOI	Ag	Au	As	Co	Cr	Cu	Fe	Mn	Mo	Ni	REEs	S	Ti	Th	U	V	Zn
No	Method------------------>		Depth		ICP-MS	INAA	INAA	ICP-MS	ICP-MS	ICP-MS	ICP-OES	ICP-OES	ICP-MS	ICP-OES	IC-PMS	ICP-OES	ICP-OES	ICP-MS	ICP-MS	ICP-OES	ICP-MS
	Detection Limit------>			0.05	0.04	2	0.5	0.04	1	0.4	20	0.7	0.06	1		20	0.8	0.02	0.03	0.4	2
	Units------------------>		m	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	(NAD 83 Zone 17)																				
513	425209	5226835	11	54.1	0.15	1	2.1	6.69	32.4	31.9	15870	437	1.80	15.0	241	3268	165	0.25	2.34	57.1	96.2
515	424243	5215720	9	11.3	ND	1	2.2	1.02	12.9	9.27	8979	122	2.29	7.0	144	5029	206	3.55	12.8	15.7	30.8
516	423794	5216007	1	47.1	0.11	1	0.9	6.95	18.5	21.2	5019	41	1.92	18.0	269	4661	106	0.30	11.2	14.1	34.8
517	423058	5215796	0.5	30.0	0.08	1	1.5	8.54	10.4	11.9	3363	43	1.48	9.0	64.6	1880	165	0.16	3.76	9.1	50.1
518	422189	5215413	2	36.6	0.09	1	2.9	5.76	8.98	16.8	2641	36	1.83	7.0	87.7	6324	106	NM	6.20	12.5	30.9
519	420546	5214832	9	34.6	0.18	1	3.1	2.02	34.0	23.4	17345	259	2.32	16.0	521	2632	313	1.68	14.6	62.8	73.6
521	418311	5214009	4	45.2	0.08	1	3.0	1.39	13.7	19.5	3669	37	1.48	18.0	266	2197	124	0.26	11.9	14.0	32.7
522	417122	5213399	2	75.8	0.10	1	1.8	8.32	10.5	15.4	7183	80	0.70	9.0	101	2692	102	0.92	8.14	9.1	36.8
523	416341	5214030	6	32.4	0.09	1	3.2	6.29	33.5	17.9	13621	238	0.89	20.0	222	1562	373	1.80	10.8	23.2	61.2
524	415875	5214720	7	13.9	0.10	1	2.0	1.74	33.2	23.7	12978	250	1.48	21.0	261	1070	307	1.24	14.0	27.1	68.9
525	415510	5215537	5	92.8	0.04	1	3.0	6.89	10.5	17.8	5437	273	2.69	12.0	73.3	2313	61	1.55	5.06	9.8	21.0
526	416367	5215333	5	23.5	0.08	5	24.0	6.13	40.8	17.7	16278	203	0.53	25.0	182	5535	541	3.16	6.14	30.1	65.6
527	416286	5216436	8	44.2	0.15	1	2.1	5.52	31.1	28.1	13511	332	1.27	15.0	240	3449	232	0.43	4.28	52.6	84.7
528	417149	5215897	3	48.4	0.08	1	1.8	6.01	14.2	19.7	4831	52	1.44	10.0	92.5	7359	129	0.02	4.84	14.1	53.1
529	417603	5215695	8	64.8	0.18	1	3.0	4.79	14.7	40.4	5643	75	2.03	10.0	143	3832	145	NM	5.57	30.5	54.3
530	416019	5212148	3	16.8	0.08	1	3.4	4.41	37.7	14.6	15829	231	0.73	23.0	196	2554	518	3.24	8.52	30.6	71.2
531	413846	5212104	3	85.4	0.10	1	1.3	6.09	11.2	28.6	7831	615	1.25	8.0	441	3789	102	1.05	15.5	13.6	8.0
532	413268	5212809	8	18.9	0.08	1	1.6	5.26	29.9	14.8	23552	406	0.99	15.0	210	2947	428	3.22	9.82	37.7	71.8
533	413997	5214890	9	33.8	0.13	1	2.4	6.18	38.5	24.8	22488	288	1.49	21.0	289	2680	353	2.49	13.3	43.2	90.7
534	414217	5215907	9	35.5	0.13	1	1.2	5.70	38.3	24.3	27828	364	1.89	22.0	294	2865	360	2.68	14.1	49.3	95.5
535	414103	5217603	8	33.7	0.13	1	2.6	4.03	35.7	22.5	31463	364	1.75	22.0	274	5300	375	2.77	13.8	56.9	92.7
536	414456	5219440	8	32.1	0.14	1	2.3	7.00	41.1	23.1	50215	483	2.20	24.0	308	3816	412	4.18	15.2	74.7	118
537	414498	5220657	8	30.9	0.15	1	1.8	8.10	47.9	26.4	53881	683	2.60	27.0	377	2187	425	6.22	18.9	76.5	142
538	413099	5220919	4	34.1	0.11	1	1.4	3.44	9.55	18.0	2909	124	1.68	6.0	58.6	3302	85	0.06	1.66	18.2	136
539	413229	5221675	2	50.0	0.08	1	2.6	16.9	18.1	26.6	4469	62	28.3	9.0	95.1	2318	179	0.16	1.74	14.5	63.8
540	412984	5218697	1	85.0	0.06	1	INF	2.71	5.45	7.97	4873	320	1.07	5.0	22.3	3619	71	0.52	0.90	6.9	45.0
542	413054	5219062	1	83.7	0.04	1	2.3	3.38	7.89	22.9	3297	80	2.16	9.0	52.9	3343	40	0.51	2.07	7.9	66.4
543	413474	5219792	3	63.4	0.09	1	3.1	3.09	31.9	31.1	109847	286	3.16	17.0	738	4019	191	8.29	1.74	>180	95.3
544	412270	5218681	7	27.1	0.15	1	2.5	3.38	37.8	23.6	18986	305	0.99	24.0	183	3818	412	2.48	4.24	38.6	67.2
545	412503	5219663	7	28.5	0.07	1	4.2	6.23	29.8	17.1	15252	264	0.70	19.0	150	4774	316	1.78	3.16	29.9	52.7
547	412265	5217088	2	92.7	ND	1	2.5	9.07	4.64	7.76	1998	39	0.89	4.0	55.1	10072	29	0.07	4.11	5.1	6.5
549	410278	5222894	1	85.6	0.08	1	3.2	5.61	8.13	12.5	4133	180	0.99	5.0	84.1	2318	65	1.16	4.69	6.2	18.1
550	417575	5227993	4	90.5	ND	1	3.1	2.95	10.3	8.91	1269	56	0.60	8.0	24.9	1890	31	NM	0.45	8.2	45.1
551	417731	5229273	4	69.7	0.06	1	4.8	3.46	12.8	16.2	9044	115	1.00	11.0	55.0	1171	109	0.51	0.70	11.5	55.0
552	421127	5233554	14	42.1	0.18	1	3.6	5.83	28.5	21.2	30538	563	1.33	18.0	263	1659	208	0.77	6.49	78.8	70.1
553	423483	5233828	0.5	28.3	0.09	1	6.2	4.04	9.71	18.1	2166	31	0.73	9.0	70.0	6346	66	0.03	0.59	7.2	22.7
554	423187	5234857	2	39.7	0.12	1	5.0	51.5	22.4	22.8	7835	91	0.92	14.0	133	2063	149	0.17	1.16	31.6	37.9
555	430976	5243776	1	47.1	0.08	1	1.8	4.25	18.6	23.2	3047	84	0.76	17.0	98.9	3697	59	NM	0.66	18.2	43.6
556	434165	5249514	2	28.6	0.08	1	3.3	12.3	24.0	20.4	7604	199	0.43	14.0	113	2722	240	0.49	1.59	19.0	67.3
557	434445	5244800	1	61.9	0.07	1	2.0	5.78	16.5	22.3	2708	45	1.23	14.0	87.8	4395	91	0.13	0.63	11.8	51.9
558	433718	5237713	9	44.8	0.21	1	7.1	4.06	35.4	28.8	38473	922	0.91	19.0	239	2886	263	0.96	1.17	105	73.1
559	428243	5227958	5	37.0	0.06	1	1.6	5.67	28.0	27.5	9381	166	1.50	20.0	144	3560	224	0.60	2.69	19.9	48.5
560	427766	5227793	2	38.3	0.07	1	1.5	2.63	26.5	24.4	8258	117	1.08	21.0	156	3289	235	0.48	2.34	24.1	43.1
561	425571	5224084	7	55.4	0.08	1	1.6	6.04	25.6	24.3	9898	141	1.37	19.0	180	2420	98	0.08	2.78	21.7	63.8
562	423167	5217012	4	42.1	0.12	1	1.9	5.08	22.0	23.8	8605	153	2.49	15.0	284	7471	165	0.72	12.7	24.5	62.6
563	422784	5217719	3	40.0	0.17	1	2.4	10.5	16.9	22.6	8976	83	2.52	16.0	265	9875	160	0.40	7.36	32.0	45.7
564	422233	5217942	6	37.3	0.08	3	1.2	ND	7.99	17.0	2829	32	3.30	11.0	112	3187	86	0.27	6.41	8.7	37.3
565	420466	5215858	9	17.9	0.07	1	2.2	2.25	23.5	16.1	7657	103	1.60	15.0	257	2857	297	1.46	11.8	20.3	56.2
566	420581	5217183	6	24.6	0.08	1	0.6	1.93	28.3	20.7	9509	137	2.16	19.0	307	3319	340	1.50	14.3	27.1	69.0
567	420846	5217965	1	46.9	0.18	1	1.4	3.60	30.6	29.7	9388	185	3.75	18.0	442	3492	169	0.44	10.2	43.0	82.9
568	420196	5218870	1	35.1	0.09	1	1.4	2.42	20.4	17.4	18071	117	2.10	14.0	331	3573	160	3.74	6.25	27.1	52.0
569	419760	5217734	2	61.6	0.08	1	1.0	2.97	15.8	17.7	4289	54	2.18	15.0	172	3718	94	0.31	3.35	14.7	48.9
570	418632	5217259	4	23.1	0.09	1	1.7	2.55	29.4	19.7	11642	281	0.98	17.0	226	3043	285	1.59	7.09	26.1	60.1
571	417610	5217004	6	43.6	0.11	1	1.6	6.56	34.2	26.4	9847	209	2.43	18.0	239	2688	193	0.61	9.77	31.9	60.6
572	416862	5218205	1	45.0	0.11	1	3.0	3.06	18.5	23.5	3407	33	1.36	18.0	223	5303	86	0.13	6.97	18.3	37.3
573	415989	5218174	8	38.8	0.14	1	2.0	4.32	30.2	23.4	10999	194	1.34	16.0	312	4117	136	0.41	7.04	48.3	60.5
574	419378	5219243	4	28.0	0.13	1	2.0	8.12	34.2	19.5	23554	584	1.15	22.0	318	2443	327	2.22	8.04	45.7	81.9
575	419982	5219916	3	38.9	0.09	1	3.2	29.3	18.3	20.9	4567	74	1.40	13.0	220	2023	156	0.23	9.52	14.4	40.8
576	419370	5219985	5	30.1	0.13	1	1.5	3.68	38.3	21.6	24390	502	1.45	25.0	318	996	368	2.17	7.65	47.3	85.9
577	418522	5219606	3	23.1	0.07	1	2.0	5.25	33.9	20.0	15082	252	0.83	26.0	236	1589	429	2.11	5.10	31.1	78.4
578	418001	5219954	4	25.6	0.10	1	0.8	5.81	36.3	18.9	14310	201	0.66	25.0	220	2765	316	1.43	4.04	28.9	80.9
579	418361	5220798	4	35.6	0.08	1	1.8	4.63	24.3	19.1	5923	128	0.51	18.0	111	3078	178	0.33	3.41	12.7	56.0
581	417982	5221873	1	48.6	0.13	1	1.9	9.88	21.0	23.4	5392	105	0.58	20.0	137	3037	76	0.13	3.74	9.9	58.2
582	418357	5222458	4	56.4	0.20	1	2.7	10.1	17.5	36.1	10402	117	1.82	15.0	145	7886	86	0.08	2.30	44.3	70.7
583	417748	5222738	3	27.8	0.10	1	2.6	7.01	31.9	23.6	9890	183	0.77	21.0	196	2503	222	0.71	4.22	25.5	72.5
584	416709	5222575	6	52.9	0.11	1	3.2	6.24	18.6	21.0	7983	121	0.81	15.0	130	3185	100	0.12	1.69	16.6	58.4
585	416104	5222685	5	60.7	0.08	1	2.1	7.22	19.9	21.9	8127	305	1.18	14.0	145	2279	64	0.06	2.47	19.6	85.0
586	416251	5222316	4	77.9	0.08	1	3.2	3.03	8.93	21.7	2939	39	1.94	11.0	115	3387	58	0.59	1.88	9.4	82.2
587	416241	5221300	4	29.8	0.10	1	3.2	6.41	22.5	22.8	6057	125	1.01	14.0	144	2103	273	0.52	3.01	21.8	78.7

Site	Easting	Northing	Sample	LOI	Ag	Au	As	Co	Cr	Cu	Fe	Mn	Mo	Ni	REEs	S	Ti	Th	U	V	Zn
No	Method----------------------->		Depth		ICP-MS	INAA	INAA	ICP-MS	ICP-MS	ICP-MS	ICP-OES	ICP-OES	ICP-MS	ICP-OES	IC-PMS	ICP-OES	ICP-OES	ICP-MS	ICP-MS	ICP-OES	ICP-MS
	Detection Limit------->			0.05	0.04	2	0.5	0.04	1	0.4	20	0.7	0.06	1		20	0.8	0.02	0.03	0.4	2
	Units----------------------->		m	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	(NAD 83 Zone 17)																				
589	415111	5221325	8	30.7	0.13	1	3.5	6.30	38.8	23.5	30736	495	1.65	23.0	316	2848	316	2.70	13.3	54.1	97.0
590	414578	5221986	7	29.0	0.14	1	1.3	8.32	43.6	24.6	30990	723	1.89	27.0	310	5088	283	2.60	14.0	49.6	121
592	416007	5224006	1	81.5	0.07	1	1.6	6.15	9.81	11.4	6174	287	0.95	9.0	50.6	3937	54	0.48	1.48	5.9	54.7
593	415262	5224493	9	32.4	0.11	1	2.6	3.26	36.9	21.5	18519	323	1.60	22.0	259	3921	251	1.34	10.4	37.2	88.5
594	415184	5225275	8	32.0	0.12	1	2.5	3.53	32.6	23.3	15074	228	2.55	20.0	237	2439	219	1.27	8.85	31.4	79.8
596	417245	5226816	5	21.5	0.08	1	2.1	5.33	37.4	19.6	20606	356	0.82	23.0	190	3903	434	3.09	4.41	45.5	67.8
597	418584	5228160	4	44.1	0.08	1	2.4	2.56	12.3	17.2	2425	28	0.94	17.0	124	1849	87	0.10	3.43	9.5	32.9
598	420029	5230487	3	51.4	0.12	1	3.6	1.98	20.3	27.7	5367	100	1.18	14.0	143	3827	98	0.04	1.61	26.0	55.4
600	430561	5241460	2	36.2	0.11	1	0.6	3.43	32.1	27.8	11010	156	0.72	22.0	132	2914	178	0.32	1.15	27.8	73.5
601	430095	5243728	4	57.1	0.14	1	0.3	2.38	20.3	36.6	4894	60	1.13	18.0	86.4	3707	53	NM	0.59	18.5	68.8
602	431183	5244286	6	14.2	0.05	1	1.8	5.78	17.8	9.67	8818	199	0.45	12.0	88.5	2237	244	0.69	0.56	20.5	40.5
603	430984	5246395	7	31.2	0.12	1	2.3	5.07	24.4	19.1	9057	309	0.69	13.0	116	8033	170	0.26	0.63	29.0	64.8
604	428415	5250063	2	38.1	0.12	1	2.7	7.16	24.3	21.4	6245	129	0.82	15.0	137	4181	102	0.10	0.71	17.2	54.1
605	429059	5250830	1	35.3	0.11	1	0.6	1.27	25.7	19.7	6292	160	0.49	17.0	127	2808	114	0.13	0.71	15.7	65.9
606	434429	5257107	12	60.2	0.22	1	1.3	8.12	19.1	35.4	15360	118	1.84	24.0	44.4	2524	192	0.56	1.51	35.6	147
607	434172	5255904	18	30.3	0.06	1	1.2	6.75	32.0	25.4	16837	336	1.49	20.0	78.5	2324	338	1.30	1.93	40.3	63.4
608	433482	5247265	4	70.2	0.11	1	1.4	2.86	16.5	23.9	6182	149	1.03	13.0	88.1	3858	59	0.03	0.58	20.6	64.4
609	432021	5242690	14	39.2	0.11	1	1.3	2.06	34.0	27.6	10014	315	0.82	18.0	156	3024	193	0.31	0.95	36.3	64.8
610	431708	5238565	4	54.1	0.16	1	2.5	10.0	23.4	32.9	9786	163	1.27	15.0	251	2763	106	0.15	1.34	69.3	57.8
611	431407	5236185	1	40.5	0.09	1	1.5	2.26	36.2	40.8	11781	221	1.23	24.0	200	3481	132	0.35	2.91	30.8	72.8
612	430551	5233431	9	31.2	0.10	1	1.5	ND	43.3	26.8	18703	289	1.06	20.0	264	4192	166	0.60	2.76	44.1	80.4
613	425643	5234052	6	56.0	0.12	1	2.1	7.03	28.3	39.3	8882	150	2.79	19.0	165	2489	117	0.48	3.89	19.3	81.3
614	422549	5230913	7	53.6	1.01	1	1.9	4.84	183	38.6	14926	328	8.97	24.0	192	6976	172	1.82	3.95	65.2	>150
615	421765	5231111	4	38.8	0.11	1	1.9	8.54	28.4	26.0	7814	133	0.71	18.0	172	2923	209	0.30	2.20	24.5	55.7
617	420950	5230752	6	32.6	0.10	1	2.2	12.3	34.2	19.8	16146	237	1.03	22.0	246	3253	271	0.90	7.14	32.8	75.8
618	420058	5229083	6	39.1	0.12	1	1.1	3.58	32.5	24.4	12562	198	1.32	20.0	266	8741	207	0.64	8.69	37.2	75.1
619	418299	5229473	6	61.7	0.08	1	2.5	7.32	12.9	23.3	9484	120	1.31	11.0	67.5	2819	113	0.16	0.77	18.0	61.8
620	418449	5231327	4	31.1	0.10	1	2.0	1.50	34.3	30.4	28868	306	1.22	20.0	288	2543	382	3.38	1.23	80.7	84.8
621	419863	5232443	2	45.8	0.08	1	3.0	6.06	24.3	20.0	6277	70	0.68	15.0	107	1898	127	0.09	0.69	26.1	47.0
622	418908	5232606	6	73.6	0.09	1	2.4	11.1	18.3	28.1	45040	434	1.35	13.0	246	3005	82	1.49	0.66	87.7	102
623	417666	5232854	2	28.7	0.10	1	2.0	3.16	27.9	27.2	16175	303	0.74	17.0	229	3819	216	0.78	1.21	35.5	58.8
624	417276	5232131	7	43.3	0.15	1	1.5	1.80	33.8	32.3	22432	562	0.97	17.0	309	4014	219	0.63	1.54	73.9	92.3
625	416179	5232264	5	55.1	0.12	1	1.6	10.2	15.9	30.8	5213	82	1.18	12.0	125	3945	82	0.03	1.87	25.2	50.4
626	416263	5231544	2	24.2	0.08	1	1.7	3.70	33.8	22.4	15314	253	0.85	25.0	206	4057	466	1.45	2.98	33.0	79.8
627	416941	5231016	6	36.9	0.15	1	1.7	6.93	30.9	24.0	17109	264	0.95	18.0	205	2993	290	0.60	2.75	56.6	79.7
628	417395	5229911	3	18.3	0.06	1	0.8	4.86	24.8	21.9	13127	336	1.00	17.0	185	1774	447	1.74	7.62	27.8	64.6
629	416592	5230063	1	90.2	0.05	1	2.1	3.47	4.55	8.99	3109	212	0.78	5.0	37.3	5363	36	0.31	0.82	4.3	21.5
630	415699	5230373	17	78.8	0.08	1	1.7	6.70	9.86	22.9	8277	96	1.26	9.0	61.5	3678	38	0.02	0.83	12.7	82.9
631	416498	5229508	12	35.2	0.11	1	1.6	5.83	31.8	20.9	12520	253	1.17	18.0	233	3198	238	0.66	7.79	36.3	65.6
632	416009	5228464	9	34.8	0.10	1	1.5	7.33	32.0	18.9	11769	208	1.13	18.0	233	2315	202	0.48	8.46	33.8	59.3
633	415588	5228694	2	23.6	0.06	1	2.3	2.19	26.4	19.8	9507	283	1.45	21.0	191	2286	358	3.06	10.4	22.8	51.8
634	415077	5228095	2	23.3	0.06	1	2.2	1.84	30.3	14.9	11342	290	0.96	22.0	168	4443	374	1.40	6.63	22.2	66.9
635	417574	5227473	4	47.8	0.05	1	2.1	8.51	16.4	10.2	>135000	221	0.97	22.0	79.8	2988	56	1.51	1.02	46.4	50.5
636	419625	5226995	1	46.2	0.08	1	1.9	5.42	22.7	19.7	6942	164	1.43	17.0	160	3901	191	0.27	7.42	18.5	55.7
637	419135	5226067	6	52.4	0.14	1	2.9	5.00	24.4	27.4	11827	111	1.48	17.0	192	3524	119	0.10	4.43	51.6	51.1
638	417940	5225743	7	41.6	0.11	1	1.8	6.80	31.4	21.7	10550	204	1.16	20.0	314	4214	204	0.39	7.50	36.1	61.4
639	417972	5225301	6	59.0	0.16	1	1.6	2.43	15.1	43.2	9212	156	3.65	13.0	191	3797	119	0.10	3.10	41.9	88.2
640	417780	5224630	4	47.3	0.09	1	3.1	2.22	18.6	19.2	3677	54	1.17	14.0	143	3144	89	0.07	4.39	19.9	38.2
641	418842	5224104	1	37.1	0.06	1	4.6	2.52	23.4	20.8	5467	160	1.19	14.0	217	5690	180	0.36	9.35	19.3	39.2
642	421152	5225641	12	53.5	0.16	1	2.2	3.04	14.9	34.7	6811	86	7.22	13.0	93.7	3748	97	0.08	2.20	14.2	43.3
643	420468	5225362	4	40.0	0.15	1	2.6	4.40	21.6	23.5	6697	88	3.11	14.0	119	4064	149	0.07	3.04	30.3	40.9
644	419836	5224523	4	30.0	0.08	1	2.7	2.95	25.0	14.7	7770	79	1.20	16.0	79.4	3323	228	0.27	1.93	19.3	32.8
645	419527	5224607	2	83.9	0.06	1	2.5	6.39	19.4	10.4	9091	202	0.45	11.0	87.3	2089	361	0.82	0.54	22.6	45.3
647	418931	5221912	4	52.8	0.16	1	1.2	7.86	17.5	31.9	7374	83	1.36	15.0	138	2931	126	0.03	2.28	30.2	67.7
648	419162	5221690	4	34.4	0.12	1	2.3	4.58	35.4	22.6	12746	250	1.21	22.0	305	2761	305	0.92	7.18	34.7	72.1
649	420001	5221403	8	47.4	0.16	1	2.8	3.94	23.2	24.3	6080	78	1.17	14.0	192	6072	239	0.14	5.29	30.4	33.6
650	420887	5221169	8	54.0	0.21	1	1.4	2.56	30.1	32.6	13138	227	6.84	18.0	399	2661	178	0.29	15.1	53.6	64.2
651	420854	5221879	3	48.2	0.09	1	1.6	1.66	20.7	22.3	5825	70	2.66	19.0	190	4295	170	0.02	6.79	23.8	55.2
653	423439	5226648	1	46.3	0.10	1	1.7	5.37	20.5	22.7	5098	53	1.27	21.0	181	3416	180	0.21	3.00	25.4	66.2
654	423499	5227214	4	55.3	0.16	1	1.5	5.93	10.1	31.1	6674	69	1.57	13.0	86.7	1073	81	0.03	1.07	15.9	67.9
655	423684	5227583	6	64.6	0.24	1	1.7	7.82	12.0	51.3	7114	94	1.98	12.0	98.5	2928	140	0.05	1.17	25.6	>150
656	424098	5228489	2	54.5	0.10	1	21.0	6.15	16.6	26.3	4666	53	1.44	22.0	120	9920	118	0.07	2.08	14.9	49.4
657	425249	5229759	6	59.8	0.25	1	6.1	1.55	11.4	43.7	4245	65	3.16	9.0	80.3	3450	69	NM	1.28	12.6	48.8
658	428805	5230290	4	52.6	0.13	1	1.2	2.91	13.3	32.3	4109	45	1.60	14.0	155	4296	58	0.04	4.37	17.6	53.8
659	432096	5237159	3	25.7	0.09	1	2.1	9.02	35.4	25.6	15282	229	0.72	23.0	182	2381	326	0.78	1.47	38.3	74.3
660	433342	5243185	8	35.3	0.10	1	1.7	5.72	33.6	33.6	10348	288	1.20	18.0	169	4294	186	0.30	1.21	29.9	78.0
661	433104	5244646	2	43.9	0.09	1	2.7	9.44	12.2	24.8	2475	80	0.93	14.0	73.9	978	57	0.03	0.70	8.7	45.9
662	432804	5242198	6	46.6	0.13	1	2.4	8.62	31.0	24.7	13495	332	0.74	16.0	189	5349	206	0.52	0.95	69.7	70.0
663	432153	5234834	3	26.5	0.11	1	2.5	2.59	39.1	34.7	20446	346	1.06	23.0	201	7094	241	0.99	2.43	44.9	85.4

Site	Easting	Northing	Sample	LOI	Ag	Au	As	Co	Cr	Cu	Fe	Mn	Mo	Ni	REEs	S	Ti	Th	U	V	Zn
No	Method------------------>		Depth		ICP-MS	INAA	INAA	ICP-MS	ICP-MS	ICP-MS	ICP-OES	ICP-OES	ICP-MS	ICP-OES	IC-PMS	ICP-OES	ICP-OES	ICP-MS	ICP-MS	ICP-OES	ICP-MS
	Detection Limit------->			0.05	0.04	2	0.5	0.04	1	0.4	20	0.7	0.06	1		20	0.8	0.02	0.03	0.4	2
	Units------------------->		m	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	(NAD 83 Zone 17)																				
664	429592	5226464	2	44.0	0.09	1	2.5	1.52	23.7	26.2	4275	38	0.81	17.0	136	3515	104	0.03	3.44	30.3	43.4
665	428597	5224692	7	41.9	0.11	1	1.9	7.08	37.2	33.0	12476	179	1.01	21.0	237	4916	134	0.16	4.99	32.0	68.1
666	427222	5217897	7	26.7	0.07	1	1.8	1.69	29.9	21.4	8593	136	4.69	17.0	399	1627	89	0.20	31.6	38.1	40.3
667	426552	5217341	17	40.0	0.30	2.5	2.1	2.60	40.3	37.1	19773	494	9.92	18.0	657	2139	155	1.38	79.1	72.1	111
668	427646	5218661	3	37.2	0.11	1	1.6	2.63	25.6	30.7	8700	151	3.06	41.0	313	3715	98	0.43	17.8	19.8	57.0
669	427497	5219878	3	37.4	0.10	1	1.4	4.53	27.5	42.6	9545	288	5.63	37.0	325	3569	205	1.24	24.3	34.3	62.9
670	426026	5218180	2	44.6	0.09	1	2.2	4.62	15.3	20.1	3397	33	5.43	11.0	256	2459	93	0.33	18.4	23.8	51.0
671	425139	5218399	1	39.8	0.09	1	0.9	9.97	16.5	19.6	2830	41	2.06	15.0	204	7959	105	0.13	15.6	12.3	31.9
672	424410	5218172	8	49.4	0.12	1	2.0	3.29	24.1	24.8	14283	163	5.17	16.0	378	6894	168	1.24	42.1	45.4	53.0
673	424391	5220233	2	32.1	0.07	1	2.1	10.4	15.3	14.3	8132	72	1.36	13.0	248	2899	178	0.37	6.95	30.3	38.4
674	424648	5219932	18	58.2	0.17	1	1.8	1.04	25.3	40.3	33006	912	5.19	20.0	339	9633	107	1.41	10.1	52.7	72.5
675	424734	5219424	9	50.1	0.18	1	1.4	3.20	20.4	30.4	17339	176	2.43	14.0	437	2158	111	0.61	11.4	55.8	51.6
676	424083	5220005	3	60.1	0.25	6	2.7	2.23	19.1	40.4	4822	62	2.15	15.0	286	5294	69	0.06	9.23	24.8	71.0
677	423950	5219768	4	29.7	0.13	1	1.3	2.24	17.5	18.0	13423	124	1.89	11.0	280	2831	212	0.83	5.99	46.7	39.2
678	422564	5221298	2	60.1	0.10	1	2.1	2.89	11.7	21.6	3331	46	4.88	10.0	248	6383	64	0.12	11.0	12.3	42.0
679	421552	5220439	1	59.2	0.10	1	1.6	5.85	15.6	29.0	2713	50	3.53	17.0	377	3982	106	0.13	9.35	13.3	66.7
680	421566	5221743	4	58.1	0.12	2.5	2.2	6.02	33.2	37.4	45461	316	11.8	27.0	573	4299	268	4.47	13.8	46.3	>150
681	422682	5222293	6	43.2	0.16	1	1.1	7.47	12.1	25.5	4563	59	10.8	10.0	129	2196	90	0.09	4.05	14.3	31.5
682	421482	5222875	5	44.8	0.12	1	1.2	2.59	25.1	24.1	10322	179	2.81	16.0	380	2281	184	0.49	7.18	28.3	56.4
683	421582	5223653	4	45.7	0.12	1	1.9	6.05	22.9	22.5	10398	138	2.86	16.0	309	5132	138	0.30	6.16	32.1	49.5
684	423850	5223839	3	45.3	0.12	1	2.3	15.0	16.5	26.8	6084	66	1.73	17.0	198	3678	146	0.15	5.32	21.7	52.6
685	422368	5224250	6	63.9	0.10	1	1.9	7.18	16.2	22.3	4537	69	10.7	12.0	141	3046	44	NM	5.10	26.8	49.9
686	421955	5224582	7	47.6	0.11	1	1.5	11.0	20.5	20.4	9064	117	2.83	16.0	270	3101	94	0.20	6.26	24.3	44.2
687	421619	5226309	5	39.0	0.07	1	7.7	5.46	22.2	23.8	4953	73	2.00	22.0	215	2728	93	0.06	3.83	17.4	47.1
688	421564	5227526	11	47.1	0.17	1	3.0	2.91	38.0	32.5	11870	364	2.43	19.0	291	3295	167	0.28	4.34	44.9	78.2
689	422289	5227776	1	41.0	0.09	1	1.4	6.44	17.8	13.9	4562	84	0.85	11.0	144	2596	76	0.02	3.19	16.0	20.3
690	422296	5228115	5	32.8	0.06	1	2.0	4.69	21.0	18.1	5161	73	1.47	19.0	221	4060	63	0.04	3.64	21.4	34.8
691	422200	5228642	9	43.8	0.14	1	2.2	5.04	33.4	29.6	8490	243	1.92	17.0	259	2038	170	0.18	3.77	37.3	63.6
692	422383	5229323	NM	48.2	0.11	1	2.2	3.90	25.2	25.3	7007	88	1.17	21.0	192	2494	149	0.14	2.33	26.2	58.8
693	422678	5229879	4	42.8	0.12	1	1.5	10.3	28.5	21.0	8972	197	0.96	17.0	211	5139	162	0.20	2.47	36.6	55.4
694	422537	5230914	10	52.0	0.20	1	1.8	2.57	23.9	28.7	14814	290	1.39	21.0	272	2854	129	0.26	2.28	54.4	64.2
695	423552	5229928	12	50.4	0.21	1	1.0	3.07	19.0	27.8	9437	239	1.53	17.0	186	2992	139	0.17	2.06	46.5	42.4
696	427957	5223183	6	43.3	0.16	1	0.9	2.80	31.2	26.7	9753	216	1.08	18.0	279	2757	142	0.22	3.88	41.6	49.3
697	427866	5224419	10	47.1	0.18	1	0.9	3.82	32.2	35.6	10600	217	1.75	18.0	211	13941	95	0.15	6.45	30.1	81.8
698	429052	5225268	7	51.1	0.10	1	1.5	4.32	22.9	24.6	6689	72	0.78	16.0	149	3106	136	0.05	4.16	34.2	59.6
699	428107	5225776	12	48.1	0.15	1	1.2	3.74	36.9	38.4	14029	375	1.17	19.0	265	3710	169	0.17	4.91	56.2	82.1
700	427344	5225867	5	27.6	0.08	1	1.2	1.67	31.9	23.2	15387	268	1.39	26.0	205	4170	269	0.57	3.32	41.5	80.6
701	426990	5226594	9	40.2	0.14	1	3.5	16.5	32.4	35.8	12328	190	1.42	30.0	217	3713	206	0.32	2.81	41.7	72.7
702	425963	5227610	5	50.6	0.15	1	1.2	2.60	19.0	37.1	3956	51	3.32	16.0	123	4031	98	0.03	2.92	29.1	47.1
703	425508	5228345	2	69.0	0.09	1	1.4	7.33	15.6	20.2	8185	67	2.84	15.0	99.5	1991	76	0.17	1.87	24.7	80.1
704	426018	5228602	2	56.1	0.11	1	2.6	4.33	15.8	75.6	2393	32	3.81	20.0	77.4	2964	61	0.09	3.37	10.4	50.9
705	426110	5229755	3	63.1	0.10	1	1.3	7.03	14.3	22.6	6005	65	1.18	10.0	108	3739	53	0.04	3.23	14.8	46.8
706	429574	5231369	3	41.8	0.12	1	1.6	1.50	14.2	19.2	3773	45	0.97	12.0	90.1	3535	79	0.04	2.60	15.5	29.1
707	431240	5231526	4	33.8	0.09	1	1.2	8.77	20.6	23.3	5003	111	0.85	12.0	183	4217	147	0.25	2.65	18.6	42.1
708	430769	5231891	2	51.7	0.11	1	1.5	11.2	23.5	32.7	8594	223	1.21	18.0	197	4791	120	0.28	4.11	22.3	58.2
709	431101	5233051	2	35.1	0.11	1	2.1	4.62	11.3	23.7	1255	30	1.26	8.0	66.4	3761	53	0.10	1.71	8.3	28.9
710	440461	5262471	2	43.2	0.08	1	2.1	2.23	35.9	20.5	12391	120	1.23	16.0	161	3188	219	2.33	7.95	67.1	64.3
711	441045	5263246	1	39.3	0.06	1	2.2	29.6	12.4	17.7	4570	74	1.68	8.0	94.1	1814	72	0.47	1.28	26.3	34.1
712	441353	5263072	1	42.5	0.07	1	2.3	15.2	23.3	21.0	8839	222	0.85	21.0	107	3282	216	1.19	3.51	25.0	63.6
715	443753	5267220	3	40.6	0.09	1	2.1	1.62	12.1	52.9	2621	43	1.31	15.0	64.4	4608	73	0.07	0.82	11.9	52.2
716	444063	5268860	12	52.4	0.19	1	2.3	2.92	32.6	71.1	18408	821	3.82	22.0	201	2301	118	0.34	1.38	70.9	90.3
717	445168	5269910	2	48.5	0.08	1	2.0	3.69	12.3	47.2	1518	42	1.39	13.0	98.5	3094	56	0.08	1.00	13.0	36.2
718	445672	5270755	5	64.0	0.10	1	1.6	2.67	15.3	30.2	10639	140	1.50	13.0	36.8	2643	48	0.09	0.57	42.5	146
719	445979	5272190	8	24.3	0.10	1	4.1	6.56	39.4	21.3	36689	1012	0.61	22.0	181	3128	248	3.62	3.81	71.1	107
720	446232	5271122	7	31.8	0.10	1	3.1	4.92	39.5	22.6	23318	569	0.64	20.0	164	4629	182	2.55	3.82	64.7	97.6
721	446097	5270181	8	31.4	0.10	1	5.5	3.62	38.7	24.3	21127	439	0.88	20.0	161	3688	269	2.61	4.12	59.8	91.5
722	446082	5269332	9	31.7	0.11	1	1.3	5.90	44.0	25.6	20745	427	0.70	22.0	165	4514	301	2.60	4.32	56.9	102
723	446145	5268287	3	20.9	0.09	1	2.0	13.8	62.0	57.0	8562	83	3.88	21.0	149	3092	276	1.58	7.69	39.8	57.3
724	449083	5270270	9	36.5	0.14	1	2.2	6.51	37.7	38.2	11108	295	1.19	24.0	142	3785	176	0.26	1.10	32.5	83.2
725	449726	5271571	2	53.3	0.06	1	2.0	2.70	9.12	24.7	2088	45	1.13	16.0	34.0	15844	66	0.14	0.57	7.6	34.0
726	449621	5272271	5	60.7	0.14	1	3.3	2.36	16.8	36.6	8388	119	1.90	18.0	91.0	2477	84	0.06	0.83	31.7	64.9
727	449696	5273686	5	25.9	0.09	1	2.7	12.6	33.7	27.3	12292	308	0.78	23.0	104	3122	185	0.77	1.07	25.2	89.0
728	450516	5273258	2	50.0	0.05	1	2.9	2.57	9.06	19.8	2064	75	0.88	13.0	19.7	2666	48	0.47	0.30	5.0	39.6
729	450301	5272516	8	22.2	0.08	1	1.6	6.30	26.6	21.8	8789	257	0.81	17.0	90.0	3304	171	0.34	0.82	20.4	65.1
730	450339	5271841	10	53.5	0.10	1	1.3	9.00	24.6	34.0	9405	359	2.03	17.0	90.1	1842	92	0.23	1.25	26.3	63.0
731	450205	5271437	4	61.5	0.09	1	1.7	3.97	13.6	27.4	3240	64	2.05	14.0	47.4	6407	71	0.12	0.94	9.9	59.9
732	450228	5270972	5	25.5	0.08	1	3.8	2.98	32.4	27.7	11158	265	0.76	21.0	110	1857	264	1.06	1.04	25.3	65.2
734	450881	5272710	6	33.8	0.10	1	0.9	5.40	39.4	31.1	12305	369	0.87	27.0	116	4186	233	0.55	1.17	27.7	85.3
735	451271	5272051	2	51.7	0.08	1	2.2	7.64	29.5	51.7	6806	94	1.67	32.0	164	2249	152	0.75	2.12	13.1	73.7

Site	Easting	Northing	Sample	LOI	Ag	Au	As	Co	Cr	Cu	Fe	Mn	Mo	Ni	REEs	S	Ti	Th	U	V	Zn
No.	Method-------------------->		Depth		ICP-MS	INAA	INAA	ICP-MS	ICP-MS	ICP-MS	ICP-OES	ICP-OES	ICP-MS	ICP-OES	IC-PMS	ICP-OES	ICP-OES	ICP-MS	ICP-MS	ICP-OES	ICP-MS
	Detection Limit------->			0.05	0.04	2	0.5	0.04	1	0.4	20	0.7	0.06	1		20	0.8	0.02	0.03	0.4	2
	Units------------------------>		m	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	(NAD 83 Zone 17)																				
736	451772	5271947	8	38.6	0.16	1	2.0	2.51	40.3	51.1	9323	243	1.04	20.0	224	3998	135	0.21	1.95	27.5	80.6
737	451220	5270961	12	52.2	0.25	1	1.5	10.2	28.1	65.9	18787	776	3.10	20.0	244	4298	77	0.18	1.87	47.7	109
738	452664	5272213	6	51.5	0.20	1	1.7	6.85	25.0	38.9	11050	292	1.42	19.0	145	3760	126	0.19	1.72	37.9	72.9
739	453011	5274947	5	37.5	0.16	1	1.2	4.86	33.1	60.5	14432	229	2.05	22.0	243	3926	107	0.93	2.65	88.7	73.2
740	453150	5274281	6	48.4	0.21	1	1.4	6.82	41.1	47.0	13874	580	1.13	17.0	255	5238	127	0.54	1.76	61.7	81.1
741	453534	5273076	4	26.8	0.13	1	2.3	8.85	36.3	39.4	24322	488	1.38	24.0	198	4579	126	2.05	1.68	51.6	106
744	454230	5276890	3	45.4	0.17	1	2.0	3.04	45.4	48.8	18994	354	1.48	27.0	211	2008	183	0.64	2.34	75.7	120
745	453782	5277578	1	38.0	0.09	1	1.4	5.60	26.7	32.5	6179	174	1.19	17.0	113	3126	91	0.10	1.37	29.4	62.8
746	455304	5278449	3	58.5	0.14	3	2.0	9.40	8.04	58.1	2863	42	3.42	11.0	61.0	4295	71	0.84	1.00	7.3	53.9
747	455178	5278169	5	53.5	0.20	1	2.5	2.97	35.6	48.1	31502	167	2.19	20.0	596	6022	169	3.76	2.04	>180	80.3
748	458053	5281248	3	43.5	0.15	1	2.0	5.91	25.2	30.4	6426	93	0.57	17.0	155	2287	121	0.21	1.39	19.9	50.4
749	457677	5280534	2	40.8	0.18	1	1.9	3.01	19.6	35.4	5630	60	0.87	15.0	128	4837	80	0.07	1.35	21.6	47.2
750	456778	5280044	2	38.9	0.15	1	1.9	9.19	28.5	52.5	7803	98	1.82	22.0	222	2296	126	0.66	2.37	36.3	92.0
751	456221	5279846	2	34.1	0.11	1	2.1	8.46	15.6	37.0	2315	47	1.13	14.0	94.3	3603	69	0.05	1.73	12.9	40.0
752	455306	5279586	4	39.0	0.20	1	1.8	3.29	31.6	52.5	8388	142	0.90	18.0	267	6331	165	0.48	1.98	41.4	61.4
753	453468	5278722	2	25.8	0.08	1	3.3	1.92	32.5	33.4	14127	272	0.65	23.0	155	4925	204	1.04	1.35	37.8	78.0
754	452581	5279072	5	40.4	0.15	1	2.0	7.50	37.8	53.4	21517	426	1.09	23.0	192	4021	184	0.72	1.84	61.8	95.1
755	452619	5278104	1	26.5	0.24	1	1.6	3.70	25.3	129	4624	23	0.89	19.0	218	4981	116	2.10	3.46	20.9	35.9
756	452648	5277125	9	44.5	0.13	1	2.3	7.62	34.6	52.4	15656	398	1.62	21.0	157	2874	144	0.42	2.48	46.6	103
757	452789	5276351	15	44.9	0.15	1	2.1	5.70	38.6	42.0	23104	502	1.84	17.0	168	3150	121	0.70	3.05	59.7	105
759	452785	5275572	2	50.4	0.10	1	1.7	6.25	19.6	94.4	3264	82	1.37	20.0	59.4	3421	64	0.04	0.49	20.7	63.5
760	452332	5275326	3	47.9	0.15	1	3.5	2.84	31.4	84.0	6870	171	0.96	23.0	125	2565	104	0.17	0.88	20.9	70.5
761	451096	5275888	1	54.6	0.07	1	2.7	11.0	16.2	19.8	3951	79	0.59	15.0	70.1	2279	30	0.12	0.99	14.0	61.6
762	450471	5275726	1	58.4	0.12	1	1.3	6.50	19.6	35.4	4446	66	0.69	12.0	87.1	4157	52	0.31	7.81	11.7	19.5
763	450796	5275141	2	37.8	0.11	1	1.4	8.28	33.5	43.1	9372	282	1.48	21.0	94.8	4563	177	0.30	0.83	22.7	88.3
764	448938	5273912	5	20.2	0.10	1	1.4	10.9	28.0	21.5	10094	249	0.84	20.0	89.9	3832	212	0.64	0.90	21.9	76.2
765	448475	5273077	5	78.7	0.05	3	1.7	4.29	11.0	23.9	2977	68	0.97	14.0	28.0	3391	54	0.84	0.28	5.4	66.5
766	444853	5274939	8	24.9	0.13	1	2.6	4.94	45.2	27.4	55142	2031	0.88	27.0	257	2312	332	4.92	5.52	93.1	133
767	445494	5273771	8	17.2	0.10	1	1.2	1.58	38.3	27.5	42330	1279	0.57	23.0	199	3390	376	5.25	4.19	68.2	100
768	444122	5273418	8	58.6	0.09	1	9.2	8.00	14.4	25.7	2604	42	1.32	20.0	150	1436	81	0.23	1.38	13.8	26.8
769	443209	5269341	3	40.7	0.10	1	2.3	6.41	9.36	46.9	1865	45	3.97	11.0	78.5	3019	53	0.12	0.89	10.7	41.3
770	441679	5268800	5	41.9	0.12	1	6.2	5.48	11.9	59.2	2607	41	6.06	13.0	107	2968	65	0.08	1.64	11.1	55.7
771	440086	5265519	1	36.3	0.07	1	1.6	3.63	15.3	21.7	4601	60	1.18	14.0	116	4393	65	0.13	1.40	21.7	35.5
772	439635	5265459	1	39.8	0.07	1	5.1	3.86	10.9	21.3	2554	52	1.26	10.0	84.9	3683	53	0.40	1.71	10.6	28.1
773	438715	5265599	1	60.0	0.12	1	1.1	5.70	14.4	85.5	3152	68	1.80	16.0	145	6229	84	1.02	1.09	14.3	57.2
774	436706	5264767	2	40.9	0.14	1	32.0	11.2	25.5	36.8	17422	102	1.37	17.0	269	3226	151	2.47	1.14	113	65.3
775	437714	5262907	1	49.6	0.08	1	8.4	3.27	7.49	35.6	1656	47	1.58	12.0	47.0	6212	60	0.51	0.53	11.3	32.2
776	437480	5265144	1	47.1	0.11	1	8.1	6.34	29.7	46.3	22877	142	1.11	23.0	313	2511	185	3.19	1.45	79.3	63.1
777	437477	5264714	2	54.3	0.12	1	8.9	8.24	21.7	48.3	4267	110	1.62	15.0	107	2330	109	0.10	0.95	21.7	54.8
778	438638	5265017	2	53.4	0.19	2	3.1	2.19	51.3	96.0	47532	316	4.78	35.0	399	3391	157	7.46	3.39	>180	114
779	439438	5264660	1	64.6	0.11	1	10.0	2.68	18.0	23.2	9531	74	1.34	14.0	113	4012	68	0.20	0.85	62.0	70.7
780	438968	5264326	1	42.4	0.13	1	27.0	1.91	28.8	40.6	14410	219	1.00	21.0	254	4777	138	1.06	2.30	45.3	73.3
781	439248	5263989	1	41.6	0.08	1	2.2	7.34	22.1	28.4	8362	52	1.47	17.0	223	2695	85	3.34	1.59	77.3	63.4
782	439729	5263906	4	52.7	0.35	2.5	2.0	6.33	33.3	51.8	79089	274	3.55	23.0	716	2240	112	7.57	2.88	>180	75.3
783	439815	5263215	1	44.6	0.10	1	1.3	8.85	22.2	24.9	11896	336	0.95	14.0	208	4388	77	0.88	2.02	52.9	68.6
784	440676	5264161	3	40.2	0.10	1	4.1	5.79	13.4	31.0	4270	69	1.40	14.0	110	2139	95	0.29	1.60	26.6	42.5
785	439496	5266500	8	48.3	0.24	1	10.0	4.82	19.9	41.7	10695	255	1.51	18.0	342	2707	81	0.17	1.84	40.0	74.9
786	440674	5267839	2	52.9	0.10	1	4.4	1.83	14.1	41.9	2744	59	5.32	19.0	80.0	4410	48	0.05	1.21	13.6	71.4
787	441661	5267868	3	43.4	0.11	1	3.9	3.42	25.8	43.5	9482	154	2.08	21.0	207	3033	141	0.22	1.28	30.5	64.4
788	441669	5267222	1	31.8	0.08	1	2.7	2.85	16.1	25.7	4676	74	0.81	15.0	75.4	5697	124	0.22	1.21	9.8	58.3
789	442150	5271320	4	66.2	0.06	1	2.4	8.69	9.83	25.1	1974	94	4.74	16.0	58.2	2638	61	0.95	0.91	7.1	56.0
790	442173	5277438	4	35.3	0.09	1	1.8	8.50	21.3	19.0	10191	416	0.84	15.0	225	4060	132	0.60	3.73	29.4	70.1
792	438948	5277196	4	13.9	0.08	1	6.4	2.31	20.9	16.5	13973	265	0.63	14.0	262	4995	153	2.09	3.87	30.1	61.1
793	436934	5277249	8	56.2	0.19	1	2.4	1.12	19.6	34.7	8685	174	2.06	16.0	268	4093	127	0.14	3.98	57.2	67.5
794	436521	5276363	2	52.0	0.12	1	2.4	1.66	14.1	34.3	2926	43	1.97	16.0	189	2212	86	0.07	4.79	14.2	52.5
795	437959	5275421	0.5	46.8	0.07	1	3.8	3.87	12.8	19.4	4988	131	0.96	13.0	174	3447	104	0.31	2.96	10.3	29.4
796	440453	5275829	1	60.3	0.09	1	3.2	3.83	18.0	28.4	6457	75	2.59	15.0	260	2068	154	1.38	5.30	17.3	71.9
797	439529	5275645	1	67.0	0.09	1	2.5	1.70	16.1	26.0	4619	61	2.43	14.0	228	2315	115	0.51	4.47	14.9	48.0
798	438643	5274679	5	33.4	0.13	1	3.2	6.46	26.2	27.8	13547	181	0.97	21.0	264	4071	219	0.70	2.20	29.5	57.3
799	438110	5273843	4	34.1	0.15	16	5.1	3.87	34.8	37.5	20067	280	1.85	25.0	389	3352	228	1.44	3.26	43.9	95.8
800	437628	5273001	3	45.5	0.14	1	9.0	3.51	16.7	31.9	5426	139	1.31	13.0	245	2359	105	0.24	2.12	16.4	35.5
801	442615	5272913	4	56.9	0.14	1	4.6	3.10	9.08	31.1	3224	58	2.82	10.0	122	7379	69	0.09	2.57	15.7	38.1
802	439920	5273120	3	31.1	0.11	1	2.1	3.38	20.8	19.4	7043	106	0.98	15.0	181	2825	131	0.45	3.04	20.8	44.5
803	441253	5270605	2	59.2	0.08	1	1.1	5.98	12.5	42.2	3071	54	1.65	12.0	67.4	26096	67	0.83	1.22	12.4	64.0
804	440120	5270605	1	61.2	0.04	1	2.2	6.28	5.34	22.2	967	21	1.30	8.0	27.5	5141	26	0.28	0.55	4.2	28.8
805	438724	5271734	3	59.7	0.13	1	1.3	1.83	17.4	60.6	2944	63	2.96	15.0	68.8	4117	70	0.14	1.13	18.8	60.7
806	438950	5270821	2	44.8	0.12	1	1.2	4.54	11.9	41.8	6477	83	2.44	14.0	156	6577	81	0.18	3.37	24.1	63.5
807	438775	5270201	2	51.4	0.16	1	1.8	3.49	20.2	123	9095	121	17.2	22.0	260	3661	131	0.55	4.71	35.5	69.3
808	437828	5270398	2	59.1	0.12	1	1.4	2.33	21.8	82.6	9074	150	8.62	21.0	173	3328	105	0.75	3.40	27.7	76.6

Site	Easting	Northing	Sample	LOI	Ag	Au	As	Co	Cr	Cu	Fe	Mn	Mo	Ni	REEs	S	Ti	Th	U	V	Zn
No	Method------------------->		Depth		ICP-MS	INAA	INAA	ICP-MS	ICP-MS	ICP-MS	ICP-OES	ICP-OES	ICP-MS	ICP-OES	IC-PMS	ICP-OES	ICP-OES	ICP-MS	ICP-MS	ICP-OES	ICP-MS
	Detection Limit------->			0.05	0.04	2	0.5	0.04	1	0.4	20	0.7	0.06	1		20	0.8	0.02	0.03	0.4	2
	Units------------------->		m	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	(NAD 83 Zone 17)																				
809	437098	5270946	1	77.1	0.07	1	1.3	4.90	14.2	28.5	4303	110	1.78	13.0	50.9	1756	87	0.63	0.55	13.3	59.7
810	437195	5270307	4	34.5	0.08	1	1.7	5.73	21.3	44.2	10329	137	4.22	16.0	140	5467	196	1.05	1.94	27.2	60.3
811	436986	5269677	4	53.6	0.10	1	2.7	5.92	18.4	46.3	3790	79	3.21	16.0	146	3061	68	0.10	1.47	25.3	46.6
812	437104	5269241	3	53.7	0.09	1	1.6	9.98	12.2	43.3	2617	60	3.12	13.0	92.3	2542	56	0.13	1.26	12.7	39.5
813	436950	5268994	3	58.6	0.16	1	3.3	4.63	8.71	58.9	5022	62	6.68	9.0	81.1	3336	46	0.08	0.90	14.9	50.0
814	437396	5268518	2	59.5	0.08	1	3.9	5.66	10.7	51.9	3002	40	7.35	10.0	115	4239	54	0.08	1.15	15.6	39.5
815	439525	5269537	0.5	53.0	0.08	1	1.0	1.69	16.8	65.5	8740	232	5.93	22.0	134	3250	117	3.64	2.90	16.8	79.9
816	439867	5268987	1	60.6	0.09	1	1.4	8.24	12.6	47.5	3623	115	2.56	16.0	106	6675	81	0.78	1.59	7.9	51.8
817	439471	5268344	0.5	59.9	0.10	1	2.4	6.18	13.2	80.9	4431	126	1.24	12.0	119	3993	95	0.77	1.75	7.8	63.6
818	438984	5268021	9	31.4	0.18	1	2.3	3.14	36.5	62.9	18794	282	2.65	19.0	223	2507	142	0.62	1.92	41.3	102
819	437798	5267124	6	24.2	0.14	1	1.7	6.83	33.1	48.9	32935	1210	3.17	24.0	218	3502	222	2.89	1.96	42.3	115
820	436016	5268114	4	69.4	0.07	1	8.7	18.8	10.9	34.4	3009	64	1.66	15.0	38.0	4973	56	0.52	0.64	9.1	54.3
821	436325	5267921	3	65.2	0.08	1	6.9	4.33	19.5	37.6	4359	83	1.58	18.0	52.6	3629	74	0.08	0.58	15.8	57.5
822	436046	5267392	7	27.5	0.05	5	15.0	3.81	21.0	19.6	13296	189	0.46	13.0	121	4148	137	1.06	0.72	40.1	52.9
823	436800	5267081	6	47.0	0.12	1	8.7	5.26	32.1	43.6	20758	409	1.08	18.0	195	4312	111	1.15	1.32	60.5	81.8
824	436354	5266741	5	68.2	0.09	1	7.0	5.97	21.2	37.7	8122	84	1.35	14.0	146	11851	82	1.67	1.31	33.4	72.4
825	436056	5266000	5	64.0	0.17	1	1.5	8.66	18.8	47.3	12927	231	1.93	13.0	161	3124	46	0.14	0.71	79.7	108
826	438079	5266565	5	47.0	0.09	1	3.0	5.82	8.66	49.0	1084	28	1.73	16.0	158	2576	48	1.84	1.35	4.2	48.2
827	438308	5265840	7	72.1	0.15	1	9.2	12.9	12.2	65.9	8721	331	3.56	17.0	114	4717	31	0.05	0.50	38.1	114
828	438129	5264137	6	90.1	0.05	1	2.1	7.45	6.25	22.7	2153	69	1.48	7.0	18.9	4159	30	0.20	0.27	6.4	51.2
829	438370	5263499	3	64.7	0.07	1	2.1	7.43	19.8	29.3	114614	281	1.44	20.0	187	4207	82	3.72	0.48	124	84.3
830	436194	5263715	10	20.2	0.12	1	1.6	3.70	20.5	35.4	12763	119	1.30	14.0	127	4398	304	1.48	0.81	62.8	50.0
831	435941	5263528	4	37.8	0.49	4	1.7	2.40	75.3	213	60165	1182	4.84	30.0	1002	5692	187	16.43	8.37	>180	67.1
832	435286	5263509	5	74.9	0.10	1	2.3	3.71	17.0	40.1	2834	85	3.02	12.0	65.2	8519	107	0.90	2.50	18.1	117
833	435212	5263043	3	89.9	0.12	1	1.9	2.72	6.74	13.1	1288	280	0.90	7.0	16.9	3229	27	0.08	0.17	14.5	137
834	435056	5262675	2	68.6	0.21	1	3.7	13.4	21.7	62.3	1566	50	1.29	18.0	109	2248	79	0.04	1.02	16.6	78.1
835	435761	5262384	2	38.3	0.22	2	1.9	5.43	35.5	78.1	80409	523	2.10	25.0	389	2793	202	7.70	5.56	125	65.2
836	436363	5262191	7	52.7	0.26	1	1.9	10.9	33.3	43.2	14469	167	1.82	15.0	361	3260	172	1.47	1.03	124	135
837	436738	5261462	1	80.2	0.05	3	2.5	4.71	13.4	12.4	2095	68	0.83	8.0	30.2	3561	186	0.48	0.29	13.3	26.0
838	435265	5262408	16	42.6	0.12	1	11.0	1.98	36.8	32.4	14247	797	1.62	13.0	159	6606	139	0.55	4.41	116	93.2
839	435172	5261315	39	43.3	0.11	1	2.6	15.2	29.4	24.0	93101	>12100	2.04	21.0	151	3508	161	2.46	4.00	163	86.0
840	434300	5264293	6	46.8	0.13	1	3.6	6.26	23.4	40.6	9553	213	1.18	18.0	150	2139	103	0.39	4.23	31.4	80.5
841	433919	5263736	4	54.9	0.13	1	4.1	5.08	21.7	41.6	11527	212	1.54	16.0	218	3178	97	0.32	1.81	55.6	61.9
842	433533	5263503	4	48.2	0.08	1	8.0	2.37	21.5	28.2	17998	183	2.68	15.0	124	4701	101	0.89	1.37	35.4	71.8
843	434639	5263123	2	40.3	0.05	1	3.7	1.35	11.3	21.7	3008	58	0.94	12.0	91.4	2227	57	0.36	1.79	11.0	38.5
844	434214	5262966	5	53.3	0.06	1	1.5	2.37	13.7	24.6	3680	102	1.03	12.0	99.0	3529	43	0.05	1.11	16.2	54.2
845	433846	5263730	4	55.2	0.12	1	3.6	1.34	20.8	40.1	10410	194	1.43	14.0	209	4138	76	0.41	1.71	51.1	55.6
846	432816	5263832	3	14.0	0.05	1	3.3	3.85	16.1	15.6	9584	161	0.45	9.0	81.5	2446	111	0.76	0.64	18.3	43.7
847	432842	5263431	3	35.9	0.10	1	2.6	2.21	28.7	42.6	14055	271	1.17	18.0	139	2730	200	1.11	1.46	33.2	91.3
848	432676	5263215	1	24.0	0.06	1	1.4	5.72	17.4	33.1	13334	345	1.63	13.0	92.5	2562	328	1.06	1.17	33.6	88.4
849	431777	5263562	2	49.0	0.08	1	3.4	6.88	22.0	36.7	4143	113	2.87	15.0	104	2592	103	0.26	1.85	20.7	96.1
850	432070	5265356	3	17.8	0.04	1	2.4	5.49	15.5	16.4	8075	139	0.59	10.0	81.9	4456	211	0.89	0.74	19.4	42.1
851	433288	5266069	4	39.1	0.13	1	0.3	2.53	26.0	32.3	14871	147	1.21	14.0	226	3614	99	0.83	2.69	69.7	64.8
852	432394	5266154	13	46.2	0.17	1	2.4	7.61	34.0	45.5	16090	461	2.04	15.0	317	6252	102	1.09	3.08	83.7	94.6
854	432637	5268030	5	56.9	0.15	1	2.1	4.94	9.76	59.3	4941	68	2.13	12.0	76.6	3501	48	0.07	0.76	15.8	73.9
855	432513	5267628	5	45.2	0.27	225	6.0	6.00	26.2	195	9812	106	0.95	21.0	105	5099	116	0.55	1.01	20.2	60.2
856	432733	5267102	1	58.7	0.08	1	1.2	7.58	9.02	74.9	1580	32	2.12	11.0	66.0	1924	51	0.65	1.18	9.1	53.6
857	431098	5268435	7	41.0	0.14	1	1.3	5.58	28.4	48.7	16068	433	1.69	17.0	162	1903	121	0.55	1.31	40.4	80.2
858	431324	5267817	3	38.5	0.12	1	1.8	3.36	32.2	42.0	14142	300	1.16	18.0	149	3506	163	0.48	1.25	35.5	75.5
860	431555	5266720	4	42.1	0.13	1	1.3	2.96	35.8	45.2	17246	286	1.34	20.0	167	5019	164	0.67	1.47	41.5	85.0
861	431409	5270406	NM	31.8	0.06	1	2.5	2.05	24.0	30.7	8273	253	1.28	15.0	77.4	3143	134	0.24	0.91	19.8	60.2
862	431404	5270114	3	70.1	0.10	1	1.3	4.36	21.9	59.3	4525	162	3.49	21.0	66.0	3322	78	0.77	1.26	12.2	79.3
863	431476	5269515	1	60.0	0.12	1	1.1	10.3	18.9	45.9	4160	130	2.35	17.0	107	1764	68	0.32	1.41	10.4	85.5
864	431426	5269024	10	55.2	0.21	1	1.5	3.14	19.2	45.5	7775	189	5.26	14.0	203	9258	68	0.08	1.39	24.5	59.9
865	430348	5270138	5	37.6	0.11	1	10.0	7.62	30.7	37.5	14199	374	1.26	18.0	109	1391	126	0.93	1.21	27.6	68.0
867	429533	5273705	4	37.5	0.09	1	10.0	2.31	27.4	31.1	8082	237	0.78	17.0	213	5444	100	0.62	2.75	22.3	74.4
868	431925	5275795	2	62.3	0.06	1	1.9	5.38	10.3	26.9	3212	62	0.91	13.0	92.4	3467	41	0.07	3.93	10.6	53.9
869	432012	5275147	3	44.3	0.10	1	4.6	3.26	18.2	24.5	4897	47	0.65	13.0	140	2964	93	0.12	5.26	22.6	34.8
870	432386	5276340	5	40.0	0.07	1	9.2	ND	10.2	43.0	1997	36	1.05	10.0	118	3704	49	0.03	3.88	9.4	29.3
871	432703	5276025	10	56.6	0.18	1	8.2	3.61	19.8	64.5	8687	102	1.71	15.0	329	3055	67	0.08	6.47	35.2	54.3
872	433789	5276236	14	24.8	0.11	1	2.1	9.21	29.8	30.3	17165	595	1.09	17.0	301	2497	182	0.98	7.19	53.7	88.8
873	434465	5275610	3	89.9	0.07	1	5.8	3.02	7.98	10.5	1484	143	0.81	7.0	22.7	2488	49	0.03	0.24	13.2	116
875	435088	5273208	11	53.6	0.20	1	1.7	8.27	23.0	41.7	9700	248	1.29	13.0	161	3182	107	0.28	2.05	45.6	69.2
876	435122	5272270	5	73.2	0.07	1	2.0	5.50	11.9	16.2	2044	71	0.91	7.0	43.3	2277	78	0.22	0.85	12.8	106
877	434864	5272209	5	70.1	0.04	3	INF	3.52	8.26	19.5	1564	67	1.85	6.0	94.3	3210	49	1.22	1.60	14.9	56.8
878	434751	5271867	5	68.5	0.05	1	1.9	5.08	7.13	16.7	1675	29	1.61	5.0	45.5	2694	41	0.39	3.22	20.1	46.5
879	433182	5272659	21	33.3	0.16	1	1.1	5.84	39.4	50.2	40355	1983	3.41	22.0	332	4488	157	2.02	6.36	69.0	123
880	433417	5271477	36	33.0	0.16	1	6.1	5.68	39.4	44.9	46709	1104	4.30	23.0	303	2620	164	1.91	5.00	70.9	113
881	433807	5270487	20	29.2	0.13	1	3.2	3.58	36.2	44.6	35346	1362	3.38	22.0	287	3152	159	1.61	5.93	62.3	109

Site	Easting	Northing	Sample	LOI	Ag	Au	As	Co	Cr	Cu	Fe	Mn	Mo	Ni	REEs	S	Ti	Th	U	V	Zn
No	Method------------------>		Depth		ICP-MS	INAA	INAA	ICP-MS	ICP-MS	ICP-MS	ICP-OES	ICP-OES	ICP-MS	ICP-OES	IC-PMS	ICP-OES	ICP-OES	ICP-MS	ICP-MS	ICP-OES	ICP-MS
	Detection Limit------->			0.05	0.04	2	0.5	0.04	1	0.4	20	0.7	0.06	1		20	0.8	0.02	0.03	0.4	2
	Units--------------------->		m	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	(NAD 83 Zone 17)																				
882	434822	5270709	2	78.4	0.06	1	1.9	3.09	8.99	17.3	1838	68	1.61	7.0	33.4	6993	81	1.04	2.18	7.3	98.9
884	433123	5269503	3	47.7	0.08	1	2.4	6.57	9.71	29.5	2425	76	1.17	14.0	83.6	4203	61	0.28	0.88	6.2	56.7
887	433639	5267318	4	59.3	0.14	1	4.0	5.96	9.86	65.8	3595	79	2.74	12.0	65.8	3451	44	0.07	1.29	18.4	79.2
888	434049	5267411	1	47.6	0.04	1	2.1	8.00	8.04	28.4	1098	17	2.23	6.0	51.7	8259	31	0.48	1.77	7.4	44.0
889	434104	5266167	1	93.4	ND	1	2.2	3.42	2.73	5.19	510	17	0.62	2.0	7.6	8976	15	0.05	0.14	2.2	55.0
890	434676	5265680	2	32.6	0.10	1	1.4	1.83	16.3	23.4	3354	71	0.82	11.0	83	4837	114	0.29	0.83	14.8	49.9
891	434955	5265171	1	41.1	0.05	1	2.4	5.10	22.2	25.3	13483	46	2.02	11.0	119	1879	60	1.61	2.86	79.8	55.7
892	435083	5264791	2	61.0	0.10	1	3.0	10.3	14.9	26.6	3465	124	1.40	15.0	70	4095	71	0.04	0.77	25.4	89.2
893	435200	5264209	7	61.4	0.17	1	1.8	3.02	16.1	46.9	11796	277	2.87	14.0	163	2392	52	0.11	1.29	38.8	96.9
894	435417	5266152	1	30.2	0.24	2.5	0.5	1.21	22.9	47.4	8087	42	1.17	11.0	641	3860	92	3.39	3.10	139	28.1
897	435682	5264093	4	53.7	0.41	3	1.3	3.23	57.4	207	25814	1045	4.82	28.0	604	4418	215	9.09	10.7	121	95.6
898	436308	5262882	20	53.1	0.26	2	3.1	6.82	34.5	54.2	56762	1287	2.87	21.0	459	6530	137	4.15	1.09	132	114
899	436318	5262591	12	45.9	0.26	2.5	1.9	2.97	42.1	52.5	73844	1660	4.10	26.0	573	3342	171	8.51	1.65	146	116
900	436234	5261567	1	72.3	0.11	1	1.4	3.37	10.9	54.4	8522	113	2.70	11.0	148	3308	92	1.44	1.63	21.2	87.2
901	434044	5262688	5	59.1	0.09	1	2.3	8.03	14.4	26.1	5968	122	1.19	12.0	86.8	4018	53	0.10	0.91	31.1	44.3
902	431539	5262150	1	11.8	ND	1	1.2	8.31	14.6	15.8	7092	120	0.55	13.0	63.9	3729	200	1.31	1.06	13.7	36.0
904	430896	5262930	1	35.0	0.05	1	5.7	3.62	19.4	15.6	7375	151	0.42	14.0	72.7	2365	88	0.30	0.88	15.4	57.7
905	429437	5264108	2	31.9	0.08	1	2.0	6.80	26.9	34.9	11204	250	1.17	18.0	121	2183	117	0.61	1.14	29.2	73.6
907	428271	5263548	5	65.1	0.06	1	44.0	1.45	10.3	28.4	3443	126	1.27	11.0	47.2	26383	51	0.18	0.55	13.4	50.8
908	428084	5260364	9	47.0	0.08	1	2.5	7.05	19.0	33.4	4904	91	1.09	13.0	99.3	5601	128	0.42	0.80	19.6	65.5
909	426786	5261712	4	55.5	0.13	1	1.3	1.70	8.73	41.8	2337	61	1.33	11.0	101	2735	60	0.08	0.62	20.5	72.6
910	427370	5262375	6	47.9	0.16	1	1.4	2.62	22.3	28.9	13006	248	0.90	14.0	123	3525	153	0.24	0.87	42.3	53.0
911	427846	5263127	6	40.0	0.10	1	8.6	4.85	28.1	30.5	12364	257	0.90	21.0	140	3461	182	0.47	1.10	22.6	67.4
912	427123	5263717	8	44.6	0.13	1	4.9	11.7	27.1	30.5	17485	374	0.90	15.0	148	3436	183	0.35	0.96	54.1	68.3
913	427498	5264727	3	51.6	0.10	1	1.8	11.5	17.9	37.2	5421	70	1.49	15.0	68.9	5155	100	NM	0.93	17.4	47.5
915	426308	5265121	4	44.9	0.09	1	11.0	2.85	25.8	36.5	9043	248	0.91	19.0	156	2443	115	0.21	1.18	27.4	75.4
916	426024	5265741	3	51.0	0.13	1	80.0	3.65	37.1	41.9	11270	196	1.35	19.0	166	3508	112	0.18	1.38	32.0	74.5
917	425649	5266286	1	42.4	0.11	1	3.8	4.47	33.0	44.4	23221	227	1.25	24.0	211	3905	156	1.51	1.44	52.5	98.4
918	429361	5264838	1	59.6	0.11	1	2.6	6.78	26.4	40.1	8061	265	1.14	17.0	146	5574	104	0.24	1.62	25.2	77.4
919	429633	5265745	1	65.1	0.04	1	2.9	6.47	8.26	18.0	2543	78	2.15	10.0	26.7	3332	55	0.37	1.04	11.8	46.2
920	429121	5265762	2	58.6	0.07	5	19.0	3.23	14.5	50.0	4270	91	1.55	15.0	75.8	3862	95	0.65	1.10	13.5	49.2
921	428580	5266127	5	24.5	0.10	10	2.1	10.9	27.2	65.3	10809	294	1.60	18.0	141	4027	231	0.58	1.64	23.3	78.3
922	428247	5267061	9	44.3	0.20	1	2.2	2.23	27.0	91.0	9068	220	1.79	15.0	169	1866	113	0.05	1.49	31.4	93.0
923	429213	5268599	1	54.7	0.07	5	32.0	19.1	15.9	39.2	6051	75	2.72	20.0	125	4457	100	2.16	1.17	11.4	62.7
924	428405	5267615	3	53.2	0.12	1	1.8	3.98	16.9	40.9	5376	155	4.84	13.0	159	3749	80	0.04	1.52	13.9	56.8
925	427746	5267786	3	44.3	0.08	1	2.6	5.22	10.0	27.4	3241	69	1.33	11.0	87.5	4132	55	0.77	0.85	7.8	35.4
926	426924	5268080	3	46.9	0.05	1	1.8	3.16	6.53	22.2	1712	52	1.32	10.0	63.1	2998	36	0.58	0.70	3.3	43.2
927	425545	5267321	3	53.8	0.13	1	3.9	9.83	29.2	106	10072	143	2.70	28.0	190	6608	97	3.01	2.10	19.2	120
928	424972	5268493	9	36.8	0.18	1	4.8	3.20	28.0	46.1	18038	433	1.52	18.0	150	3804	117	0.41	1.31	22.0	130
929	425323	5269832	1	60.2	0.07	5	3.2	5.87	22.4	51.4	10712	141	2.95	26.0	74.1	3439	71	1.44	0.92	17.5	72.1
930	429835	5269351	4	17.4	0.05	19	2.0	4.57	23.7	32.8	12329	359	0.95	18.0	87.4	2907	351	3.76	0.95	21.9	43.4
931	429801	5270667	5	25.6	0.07	1	7.1	7.46	25.3	22.7	15146	371	0.76	17.0	93.9	2677	256	1.50	0.89	26.5	56.1
932	427620	5270424	1	54.1	0.06	1	1.1	7.71	20.4	42.7	12242	156	2.43	22.0	89.7	3168	121	2.50	1.22	22.3	70.8
933	426741	5270624	1	59.4	0.15	1	1.9	7.10	21.3	50.7	10557	170	2.35	21.0	74.1	2247	100	0.12	0.96	21.7	97.7
934	425867	5270726	2	68.3	0.06	1	3.1	5.76	15.1	43.5	6487	122	2.79	18.0	56.6	4415	68	0.99	0.71	9.6	61.5
935	427329	5271619	0.5	51.4	0.04	1	1.8	6.60	6.78	15.6	1859	46	1.26	11.0	66.7	3684	49	0.70	1.85	8.6	26.7
936	426464	5272063	2	39.4	0.08	1	2.8	4.53	25.3	25.0	6803	157	0.74	18.0	152	1854	127	0.60	2.64	12.3	56.2
937	425595	5272626	7	37.2	0.11	1	2.0	3.90	28.7	28.1	11513	229	0.92	17.0	178	3022	140	0.26	2.25	32.0	76.3
940	428273	5275012	2	45.9	0.08	1	4.3	2.14	13.9	19.5	3526	60	0.73	10.0	145	4944	83	0.10	0.80	19.9	41.2
941	427528	5274803	2	39.9	0.11	1	4.4	1.17	29.0	22.6	10918	140	0.51	17.0	260	2997	175	0.74	1.44	51.4	80.0
942	427146	5274867	2	43.6	0.09	1	4.0	6.60	23.6	19.8	9005	120	0.50	15.0	232	6333	131	0.25	1.52	37.7	55.3
943	427562	5273908	3	60.0	0.15	1	9.1	8.07	26.6	37.4	5664	126	1.16	17.0	161	3746	162	0.08	1.21	64.8	118
944	427338	5274006	4	55.5	0.17	4	1.7	2.31	54.2	51.9	90459	216	2.40	16.0	1004	7328	154	13.61	5.06	>180	68.2
945	427190	5274207	1	68.3	0.05	1	10.0	7.24	23.2	14.3	13398	100	1.25	10.0	234	3124	57	5.06	1.67	72.2	53.4
946	426566	5274066	2	52.8	0.08	1	4.4	1.02	26.3	35.4	6787	313	2.21	18.0	217	8557	95	0.39	2.84	42.7	84.8
947	426363	5274356	2	58.4	0.10	4	3.8	7.15	21.0	158	7512	335	0.91	12.0	199	4401	81	0.06	2.60	42.2	100
948	426046	5274795	2	42.5	0.07	1	3.4	3.95	22.4	20.2	7123	137	0.65	14.0	141	4279	88	0.12	1.86	30.7	59.4
949	427984	5273293	2	43.0	0.10	1	11.0	4.56	28.6	101	10946	249	2.80	26.0	168	3548	127	2.20	4.58	26.4	71.0
950	427120	5273133	4	49.5	0.11	1	3.4	3.04	27.3	25.4	10978	307	0.67	13.0	235	2434	106	0.20	2.27	40.2	65.4
951	429371	5269047	1	83.9	ND	1	1.0	0.82	6.37	13.3	1116	52	1.38	10.0	14.0	1706	25	0.32	0.18	2.6	43.9
952	427442	5269566	1	50.4	0.05	1	1.3	12.6	9.23	45.0	3089	51	1.07	18.0	59.8	18191	59	1.31	0.82	5.2	46.7
953	427290	5269535	1	50.7	0.06	2	1.5	5.57	9.05	29.5	3627	66	1.35	18.0	50.5	2727	48	1.14	0.88	5.0	55.0
954	427349	5269079	6	57.9	0.17	1	0.8	7.01	10.5	52.1	10987	279	2.69	13.0	82.7	3660	64	0.06	1.02	17.6	87.8
955	426677	5269028	3	61.7	0.12	1	1.5	2.21	12.3	35.3	8482	291	1.49	9.0	59.4	2847	48	0.06	0.89	13.5	59.0
956	430576	5269028	4	65.3	0.08	1	2.9	8.06	9.89	34.8	2088	79	1.50	13.0	34.6	3887	40	0.39	0.44	9.4	96.4
957	430395	5268339	1	62.4	0.12	1	1.0	1.51	13.4	57.8	2919	68	3.22	11.0	143	2284	58	0.71	1.05	12.9	78.2
958	430320	5267757	2	34.6	0.11	1	2.0	5.82	28.0	64.1	9468	227	1.14	16.0	119	3010	123	0.22	1.21	22.3	63.0
959	430169	5267222	3	34.5	0.09	1	1.5	5.91	24.9	27.7	8988	249	0.70	14.0	107	2231	121	0.27	1.05	24.4	53.6
961	435345	5259801	7	87.4	0.07	INF	1.4	1.62	9.09	38.5	2334	229	0.49	5.0	15.1	4204	71	0.05	0.18	10.7	73.3

Site	Easting	Northing	Sample	LOI	Ag	Au	As	Co	Cr	Cu	Fe	Mn	Mo	Ni	REEs	S	Ti	Th	U	V	Zn
No	Method------------------->		Depth		ICP-MS	INAA	INAA	ICP-MS	ICP-MS	ICP-MS	ICP-OES	ICP-OES	ICP-MS	ICP-OES	IC-PMS	ICP-OES	ICP-OES	ICP-MS	ICP-MS	ICP-OES	ICP-MS
	Detection Limit------->			0.05	0.04	2	0.5	0.04	1	0.4	20	0.7	0.06	1		20	0.8	0.02	0.03	0.4	2
	Units---------------------->		m	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	(NAD 83 Zone 17)																				
962	435084	5259460	8	61.6	0.10	1	1.8	2.18	12.0	55.2	2520	84	2.05	10.0	31.3	3516	101	NM	4.81	14.5	91.5
963	430718	5260027	1	44.6	ND	1	1.6	3.77	9.37	11.9	3425	94	0.64	11.0	28.7	3935	66	0.70	0.62	7.0	39.3
964	428197	5257752	2	42.1	0.07	1	10.0	7.38	31.2	30.0	10493	118	1.64	15.0	123	4657	175	2.21	2.45	49.7	65.1
965	426225	5254920	3	48.7	0.08	1	12.0	8.05	16.5	21.2	4078	65	0.73	12.0	59.1	1589	101	0.03	0.58	12.5	62.4
966	425158	5254836	4	42.9	0.13	1	10.0	4.21	25.3	21.5	6668	102	0.41	14.0	109	3038	127	0.06	1.01	18.6	78.4
967	422149	5253430	3	62.1	0.08	1	2.3	2.66	17.9	23.0	3848	96	0.82	14.0	78.9	4460	73	0.02	0.72	14.2	74.5
968	419129	5250197	8	49.0	0.19	1	1.9	7.60	20.4	23.6	6097	121	0.78	12.0	92.4	3735	90	0.02	0.77	28.7	44.4
969	417391	5244842	13	53.4	0.27	4	INF	14.1	25.3	31.2	21941	275	0.92	14.0	162	6852	162	0.24	0.90	66.1	47.6
970	415940	5240426	6	45.9	0.13	1	2.2	4.35	22.5	23.8	7783	131	0.94	15.0	145	3138	107	0.06	1.64	23.9	48.2
971	414344	5237385	8	59.1	0.23	1	2.8	15.4	24.1	44.4	14795	241	2.67	17.0	202	3796	106	0.15	2.22	51.2	96.2
972	411743	5234144	3	46.2	0.10	1	2.1	3.00	26.7	27.0	9946	304	1.22	21.0	178	3685	109	0.25	2.86	23.9	71.4
974	412330	5231196	9	26.8	0.14	1	0.8	3.17	43.7	24.0	42316	737	0.96	26.0	289	2286	299	4.57	8.87	57.5	>150
975	411042	5231265	2	42.1	0.09	1	7.8	1.31	18.8	25.2	3896	45	1.53	16.0	281	5312	98	0.17	6.37	17.5	38.5
976	410474	5231604	2	49.5	0.10	1	2.2	6.21	22.1	30.6	3376	41	1.23	26.0	365	3255	141	0.13	6.61	13.0	60.6
977	414414	5229569	8	11.8	0.05	1	2.3	6.42	23.9	14.1	17056	340	0.54	14.0	156	7620	302	4.25	5.88	24.1	64.5
980	411134	5229065	9	67.2	0.12	1	3.8	4.36	7.84	31.8	4013	93	5.08	11.0	101	2981	52	0.17	7.20	18.0	127
981	411769	5227751	14	29.1	0.12	1	31.0	9.78	28.9	17.5	19817	445	0.83	15.0	222	7446	151	1.10	6.98	44.6	106
984	410160	5225786	6	11.9	0.05	1	29.0	4.50	25.8	11.9	18265	334	0.56	14.0	164	3225	399	4.88	5.24	25.5	82.9
986	407894	5224853	6	26.4	0.11	1	14.0	4.84	44.1	33.2	38069	883	1.15	27.0	257	2336	394	7.65	14.1	47.2	124
987	408763	5227278	10	64.3	NM	1	1.6	11.4	NM	NM	11502	219	NM	11.0	38.1	3444	102	NM	NM	43.2	NM
988	408371	5227408	1	28.5	0.07	1	2.1	2.74	16.6	18.5	7135	137	1.24	15.0	251	4165	148	0.48	6.67	22.1	46.6
989	409482	5228934	5	40.4	0.16	1	2.9	6.66	19.6	22.5	6550	127	2.80	13.0	230	12187	120	0.14	5.85	40.0	45.1
990	409017	5228658	9	43.6	0.15	1	2.6	4.68	29.8	26.5	10754	354	1.52	14.0	381	3226	103	0.26	9.12	37.3	67.5
991	409742	5229496	6	64.1	0.18	3	1.9	0.85	16.2	24.4	3838	54	2.78	13.0	150	4060	61	0.05	4.83	21.0	75.4
992	408759	5230172	4	46.2	0.20	1	6.2	5.38	25.4	34.9	11027	131	1.93	15.0	391	2886	138	0.79	6.07	74.6	72.9
993	408888	5230981	3	35.0	0.12	1	1.9	1.72	32.9	31.1	13641	320	1.49	20.0	370	2244	135	0.73	8.99	34.2	82.0
994	409375	5231565	3	40.2	0.10	1	2.3	6.82	11.8	20.5	5061	72	1.46	10.0	139	2670	73	0.17	5.46	15.2	52.3
995	408811	5232345	6	17.8	0.06	1	2.2	6.23	24.9	16.7	13247	292	0.97	17.0	236	2974	268	1.18	5.05	27.6	72.2
996	408719	5232898	9	35.4	0.14	1	3.0	11.8	36.6	26.3	16294	416	1.42	17.0	350	1477	237	0.99	6.57	50.3	87.0
997	406031	5233464	1	40.5	0.07	1	5.1	3.14	15.0	17.3	3439	55	1.16	16.0	338	4208	75	0.33	17.7	14.8	50.5
998	405981	5232747	4	37.5	0.14	1	4.2	5.94	33.3	27.0	10295	185	1.45	18.0	415	9398	183	0.53	16.8	31.9	83.6
999	405955	5231935	2	38.8	0.11	1	1.7	6.21	16.3	21.9	2611	38	0.80	9.0	129	2217	54	0.13	13.7	10.9	30.6
1000	407407	5231784	2	32.3	0.10	1	4.7	2.41	16.7	24.4	2884	35	1.07	11.0	511	4228	71	0.49	33.8	8.8	31.1
1001	407573	5231643	1	48.3	0.08	1	4.6	0.73	14.7	18.7	3245	43	1.54	12.0	208	3510	64	0.24	12.1	13.5	35.7
1002	407930	5231455	4	59.9	0.10	1	7.0	7.64	21.3	25.4	3855	70	2.62	13.0	151	14432	88	0.27	5.87	14.9	71.7
1003	407201	5231155	4	40.9	0.16	1	6.3	6.69	27.5	31.4	8577	111	2.07	14.0	508	2079	118	0.49	22.9	25.3	68.1
1004	407035	5229499	3	60.6	0.11	INF	2.2	6.23	22.8	30.9	5584	71	1.79	22.0	182	3136	75	0.43	12.5	15.4	68.0
1005	407526	5229097	4	38.3	0.13	1	5.6	4.88	33.7	29.7	10062	132	1.03	19.0	437	3109	196	1.00	13.9	24.4	73.6
1006	412501	5235821	4	53.9	0.10	1	3.2	3.03	22.9	24.5	4956	102	1.03	15.0	134	5822	58	0.05	2.40	18.9	63.3
1007	413381	5238343	8	54.8	0.20	1	3.9	3.04	34.8	68.4	51313	457	2.06	22.0	470	2581	201	4.92	2.91	89.4	87.7
1008	414839	5239624	2	43.8	0.11	1	3.6	20.4	29.9	36.8	8654	151	2.11	23.0	231	4884	152	0.27	2.89	25.9	104
1009	417517	5242096	5	32.5	0.11	1	8.1	2.30	22.1	21.6	8051	102	0.57	12.0	118	2878	267	0.34	0.83	36.4	51.0
1010	418346	5241929	7	45.3	0.11	1	2.4	5.81	17.2	24.1	4939	124	1.33	10.0	105	8708	69	0.06	0.99	22.7	63.2
1011	415628	5246939	4	36.1	0.11	1	3.5	4.02	31.6	27.8	10188	130	0.48	18.0	148	3004	87	0.10	0.70	28.4	60.9
1012	415805	5249569	8	56.2	0.16	1	3.3	1.29	11.0	33.1	5399	65	1.55	8.0	87.5	3263	41	0.05	0.63	12.5	53.8
1013	419355	5250798	11	29.2	0.12	1	7.4	3.06	14.5	30.3	5016	72	0.95	9.0	68.7	3422	60	0.07	0.61	12.9	61.3
1014	423591	5254130	6	36.6	0.16	1	5.7	5.01	33.7	24.8	8798	172	0.50	16.0	154	1812	195	0.31	1.15	27.0	76.3
1015	435491	5259415	10	45.6	0.05	1	21.0	11.8	160	74.9	2886	26	9.58	8.0	59.3	4173	81	0.64	12.9	152	42.8
1016	423889	5266868	4	50.0	0.11	1	10.0	6.92	18.1	37.7	6964	239	1.61	14.0	61.5	15898	121	0.11	0.88	20.1	73.1
1017	423814	5270093	5	44.3	0.17	1	8.3	3.42	41.8	58.9	17234	357	1.69	26.0	97.0	3528	123	0.46	0.99	28.3	99.0
1018	423568	5274146	3	41.5	0.10	1	18.0	1.38	31.4	43.5	9066	134	1.46	19.0	104	3332	192	0.31	1.05	20.1	87.0
1019	422655	5273536	1	55.0	0.08	1	16.0	3.71	23.0	72.7	6088	91	3.03	20.0	114	3808	125	0.65	1.57	18.5	106
1020	424139	5273652	6	38.6	0.09	1	14.0	13.8	31.2	28.3	12610	263	1.29	15.0	164	2914	119	0.52	2.06	26.9	70.4
1021	424111	5272755	2	67.9	0.07	INF	5.5	5.84	13.1	36.0	3790	99	2.59	7.0	44.3	2040	42	0.18	1.18	9.9	67.9
1022	423376	5272728	1	74.6	0.06	INF	1.7	7.49	15.0	36.3	5041	128	3.23	9.0	44.9	4096	46	0.47	1.28	10.5	68.4
1023	423016	5271955	1	61.4	0.08	3	5.5	6.50	13.2	66.1	3269	100	1.95	18.0	32.3	3006	46	0.63	0.43	6.9	127
1024	424557	5271282	1	77.2	NM	INF	0.9	6.91	NM	NM	10672	161	NM	19.0	NM	5931	77	NM	NM	9.1	NM
1025	423761	5271211	1	64.1	0.08	3	2.4	2.45	22.0	64.6	11676	140	3.59	24.0	74.4	1958	76	2.01	1.19	12.0	84.3
1026	422874	5271338	3	49.2	0.13	3	0.6	1.46	28.7	55.8	9077	196	1.83	23.0	78.4	4444	90	0.22	0.88	16.4	85.2
1027	423395	5270610	5	47.1	0.20	6	7.6	3.40	41.0	66.8	14237	332	1.80	25.0	98.9	4823	92	0.26	0.96	29.4	>150
1028	424637	5269990	1	74.5	0.24	1	2.1	9.30	67.7	164	11156	156	9.10	40.0	156	3160	126	4.83	2.35	14.6	>150
1029	424201	5268162	1	55.3	0.08	3	1.3	4.07	10.4	33.3	2491	65	1.49	15.0	47.7	1891	66	0.16	0.56	5.8	53.7
1030	424364	5267514	11	61.8	0.12	1	3.0	2.50	20.8	50.7	14882	680	3.19	16.0	110	2563	61	0.13	0.96	30.3	80.0
1031	422769	5268634	2	64.2	0.06	1	3.6	4.90	5.99	23.8	1559	41	1.64	10.0	27.2	2497	32	0.32	0.43	2.1	70.9
1032	422722	5269034	7	62.4	0.12	1	1.7	2.97	14.0	40.4	7634	197	1.58	13.0	47.2	4636	60	0.19	0.51	16.1	87.6
1033	422113	5267655	5	65.3	0.07	INF	1.8	5.89	18.0	34.1	4053	182	1.63	20.0	25.3	4496	77	0.21	0.45	9.1	134
1034	422088	5265506	5	44.2	0.10	1	1.8	2.12	9.39	36.4	3434	73	0.86	9.0	44.9	2890	54	0.07	0.51	8.9	48.1
1035	422416	5265230	4	53.2	0.24	1	1.9	6.38	27.5	66.1	10299	163	5.50	16.0	91.5	4724	58	0.10	0.69	42.1	72.7
1036	422270	5264815	1	38.6	0.07	1	2.0	6.37	12.5	25.9	4184	74	0.56	12.0	53.9	2308	86	0.07	0.54	9.5	36.3

Site	Easting	Northing	Sample	LOI	Ag	Au	As	Co	Cr	Cu	Fe	Mn	Mo	Ni	REEs	S	Ti	Th	U	V	Zn
No	Method------------------->		Depth		ICP-MS	INAA	INAA	ICP-MS	ICP-MS	ICP-MS	ICP-OES	ICP-OES	ICP-MS	ICP-OES	IC-PMS	ICP-OES	ICP-OES	ICP-MS	ICP-MS	ICP-OES	ICP-MS
	Detection Limit------->			0.05	0.04	2	0.5	0.04	1	0.4	20	0.7	0.06	1		20	0.8	0.02	0.03	0.4	2
	Units------------------->		m	%	ppm	ppb	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm	ppm
	(NAD 83 Zone 17)																				
1037	421975	5264029	6	55.0	0.19	1	3.2	9.32	19.2	36.8	8472	145	1.46	15.0	150	2522	134	0.10	1.47	36.4	65.7
1038	421789	5263168	2	35.5	0.09	1	2.3	5.05	12.2	22.5	2177	36	0.44	13.0	130	15477	90	0.07	0.61	9.7	26.0
1039	421381	5262982	4	10.6	ND	1	4.3	3.72	18.3	10.8	12957	162	0.27	13.0	93.5	2806	381	1.06	0.48	23.0	68.0
1041	423722	5261792	2	48.7	0.09	1	3.5	3.72	15.5	24.9	2866	49	0.63	14.0	87.9	3066	54	0.10	0.90	14.4	35.5
1042	423395	5264847	8	47.3	0.24	1	2.8	10.6	30.0	55.2	13970	252	1.02	16.0	170	5871	100	0.25	0.98	54.7	81.6
1043	423696	5264173	8	60.1	0.16	1	5.2	2.90	10.3	45.7	3918	71	1.76	10.0	86.1	4171	43	0.04	0.66	25.5	68.8
1044	423390	5263536	3	56.2	0.16	1	1.8	1.99	17.0	37.0	5414	86	0.58	14.0	94.4	3620	65	0.10	0.81	12.5	42.7
1045	424504	5263718	3	31.1	0.06	1	5.1	6.09	9.90	17.1	3121	49	0.54	9.0	43.7	4586	53	0.12	0.56	8.3	23.6
1046	424819	5263187	3	16.0	0.06	5	3.8	7.53	14.0	14.3	5527	81	0.29	10.0	62.2	3151	223	0.37	0.46	12.8	32.5
1047	424785	5262040	4	42.6	0.19	1	8.8	6.64	18.3	30.6	5671	73	0.55	12.0	103	1881	164	0.16	0.90	25.1	47.3
1048	427261	5259234	3	42.0	0.12	1	8.4	5.59	26.1	25.4	10613	284	0.70	15.0	131	3890	116	0.14	2.28	32.9	58.3
1049	427945	5259348	1	47.5	0.09	4	INF	3.26	18.4	47.0	4285	57	0.77	12.0	69.2	3598	259	0.95	0.98	14.1	105
1050	429329	5259773	2	64.5	0.11	1	261	5.97	12.8	30.8	3232	78	0.99	13.0	69.6	2415	51	0.03	0.57	17.4	52.4
1051	430167	5259844	7	44.8	0.04	1	6.5	4.70	4.39	48.7	714	12	2.10	21.0	33.1	7844	20	0.14	0.85	4.2	61.6

Metric Conversion Table

Conversion from SI to Imperial			Conversion from Imperial to SI		
SI Unit	*Multiplied by*	*Gives*	*Imperial Unit*	*Multiplied by*	*Gives*
			LENGTH		
1 mm	0.039 37	inches	1 inch	**25.4**	mm
1 cm	0.393 70	inches	1 inch	**2.54**	cm
1 m	3.280 84	feet	1 foot	**0.304 8**	m
1 m	0.049 709	chains	1 chain	20.116 8	m
1 km	0.621 371	miles (statute)	1 mile (statute)	**1.609 344**	km
			AREA		
1 cm^2	0.155 0	square inches	1 square inch	**6.451 6**	cm^2
1 m^2	10.763 9	square feet	1 square foot	**0.092 903 04**	m^2
1 km^2	0.386 10	square miles	1 square mile	2.589 988	km^2
1 ha	2.471 054	acres	1 acre	0.404 685 6	ha
			VOLUME		
1 cm^3	0.061 023	cubic inches	1 cubic inch	**16.387 064**	cm^3
1 m^3	35.314 7	cubic feet	1 cubic foot	0.028 316 85	m^3
1 m^3	1.307 951	cubic yards	1 cubic yard	0.764 554 86	m^3
			CAPACITY		
1 L	1.759 755	pints	1 pint	0.568 261	L
1 L	0.879 877	quarts	1 quart	1.136 522	L
1 L	0.219 969	gallons	1 gallon	**4.546 090**	L
			MASS		
1 g	0.035 273 962	ounces (avdp)	1 ounce (avdp)	28.349 523	g
1 g	0.032 150 747	ounces (troy)	1 ounce (troy)	**31.103 476 8**	g
1 kg	2.204 622 6	pounds (avdp)	1 pound (avdp)	**0.453 592 37**	kg
1 kg	0.001 102 3	tons (short)	1 ton (short)	**907.184 74**	kg
1 t	1.102 311 3	tons (short)	1 ton (short)	**0.907 184 74**	t
1 kg	0.000 984 21	tons (long)	1 ton (long)	**1016.046 908 8**	kg
1 t	0.984 206 5	tons (long)	1 ton (long)	**1.016 046 90**	t
			CONCENTRATION		
1 g/t	0.029 166 6	ounce (troy)/ ton (short)	1 ounce (troy)/ ton (short)	34.285 714 2	g/t
1 g/t	0.583 333 33	pennyweights/ ton (short)	1 pennyweight/ ton (short)	1.714 285 7	g/t

OTHER USEFUL CONVERSION FACTORS

	Multiplied by	
1 ounce (troy) per ton (short)	31.103 477	grams per ton (short)
1 gram per ton (short)	0.032 151	ounces (troy) per ton (short)
1 ounce (troy) per ton (short)	20.0	pennyweights per ton (short)
1 pennyweight per ton (short)	0.05	ounces (troy) per ton (short)

Note: Conversion factors which are in bold type are exact. The conversion factors have been taken from or have been derived from factors given in the Metric Practice Guide for the Canadian Mining and Metallurgical Industries, published by the Mining Association of Canada in co-operation with the Coal Association of Canada.

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